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Are Belgian Anticline Wells Likely To Prove Profitable?

For at least 10 years, indeed until the recent avalanche of new discoveries which will no doubt mark June and July of this year as red letter months in California petroleum history, important discoveries of new fields have been so few and far between that spectacular finds have hogged the publicity and caused the public to pay little heed to modest finds which might easily grow into things of economic importance.

So it has been with the Belgian Anticline field. Few oil-minded persons outside the industry know where it is situated, and yet it has 40 producing wells and, geologically, is one of the State's most interesting and puzzling areas. Its present developed area embraces at least 12 known fault blocks. Some of the most experienced California geologists say it is by far the worst faulted district in which development work has been carried on.

Slow to gain momentum, because of numerous setbacks, and particularly because of the uncertainty of exploratory work for three or four years, the field lately has been forging ahead rapidly. Time was when an exploratory hole there might yield oil and one 500 feet away might yield nothing, whereas still another, 1000 feet away in some other direction, might prove to be a heavy gasser.

The field was discovered by The Texas Company, explored with disappointing results by Pacific Western for more than a year, partially cracked open by Ohio Oil Company, and floored for the count by Union Oil Company. While at least two small independent operators have done exploratory work there, with moderate success, credit for licking the baffling obstacles presented by Belgian Anticline belongs to the four operators who collectively have bored at least 60 holes in that district.

The field lies approximately half a mile west of the central portion of the old McKittrick field. It is not an extension, but rather a northwest to southeast trending and paralleling field. Between it and the McKittrick field is a huge thrust fault extending from the Temblor field, which is situated to the northwest, to a point in or near the old Belgian lease to the southeast, which is a sort of northwest extension of the Buena Vista field.

The Texas Company discovered the field in 1946 with West'n Pet. Unit One No. 46-29 on Sec. 29, 30-22. This was in almost the center of the section and at the southeast corner of what now is the field. This well finished between 5140 and 5172 feet, and was not much of a producer. In contrast with this well was the Rankin No. 82 gusher, drilled by Pacific Western, which came in for 3500 barrels per day, and because of its position on the structure was designated as the discovery well of the Telephone Hills field, where there is rather limited production.

The astonishing showing made by this well, which was one of the largest producers completed in California two years ago, Pacific Western went back into an old hole on the Midway-McKittrick lease and redrilled it, without successful result. Then working in combination with Tide Water Associated it proceeded to drill four additional dusters in rapid succession.

That almost put a stop to exploratory work in the Belgian Anticline district until Ohio Oil Company began work there last year on its 160 acres of Tulare Fee property, southwest quarter of Sec. 19. It had water trouble with a well or two, but eventually struck its gait with wells yielding up to 1000 barrels per day from the Oceanic and Point of Rocks sands. It also got one gasser which has been rated as having a potential of 8,000,000 feet of gas per day.

Last year Pacific Western resumed work in the field, working somewhat to the northwest and taking its Midway-McKittrick No. 74 down to the Point of Rocks formation. It was at about that time that Ohio Oil Company began work on its Tulare Fee quarter-section. Pacific Western's M. & M. No. 42 was carried to the Oceanic zone. Ohio's Tulare Fee No. 1 cored two Point of Rocks zones for a total of 1,100 feet, separated by 400 feet of shale. The lower portion of the upper Point of Rocks yields black oil, and the upper portion of the first Point of Rocks and all of the second Point of Rocks yield as much as 100 barrels daily of condensate, with considerable gas.

Ohio established the presence of Oceanic sand in that area, but it was not set up as a productive formation there until Pacific Western completed its No. 84. Since then Union completed two producers—one on the 170-acre Chanslor-Canfield Midway lease, Sec. 24, and one on its Jewett Fee of about 300 acres, Sec. 24. Ohio is currently drilling its Tulare Fee No. 4 for the Oceanic zone, but geologists think it may be a little low structurally.

Most interesting well in this northwest trending area at the moment is Union's C. C. M. O. No. 87, which is reported to have cored more than 50 fet of Oceanic sand and upwards of 450 feet of the two Point of Rocks zones. Some think this well is a little down structure, and that the bit penetrated the Point of Rocks somewhat below the gas cap of the first Point of Rocks zone. The impression of production men is that this well, which may be completed before this appears in print, will be a 100 per cent oil producer and perhaps of large capacity.

The four companies operating there do not look upon the gas with disdain, and most of them have small portable condensers on hand to take care of the vapors from the gas, but they had rather have oil than gas, in all probability. Gravity of the oil from the Oceanic and Point of Rocks zones runs around 36 degs.

At the time Ohio Oil completed its first producer in the field there were 29 active wells there, and four drilling. Ten holes have been drilled since then. Probably now there are 40 producers in the field. The Texas Company has three gassers, Ohio Oil has one and Pacific Western has one or two. The Texas Company drilled the deepest hole ever put down on Belgium Anticline. Its No. 56 went to 8500 feet and picked up a thin section of the second Point of Rocks zone.

The field affords operators an opportunity to tap at least five different producing formations. These are Oceanic, Phacoides, first and second Point of Rocks, and Carneros. The ages are Oligocene, Eocene and Miocene. The Carneros is in Miocene. Wells spud in the Miocene, the formation being the Antelope shale of the Stevens sand.

Most of the wells drill as deep as 6000 feet in the Miocene. In certain sectors of the field the Oceanic sand is picked up between 4700 and 6500 feet. The field has a low ration of dry holes to producers, it being about 17 to 40. There are producing areas in the State where from 25 to 35 wells were drilled before a barrel of crude was tanked.

A prominent production engineer, who has spent a great deal of time at Belgian Anticline, has expressed the belief that the field may eventually spread out over a surprisingiy large area, and may even afford other producing horizons. Today the field is two and one-half miles long and fully three-quarters of a mile wide.

Some think the field may eventually be extended considerably farther to the northwest. The Bender interests some time ago got a small producer two miles northwest from Ohio's Tulare Fee lease. Ohio holds some government leases one to two miles northwest from its present activity, on Sec. 13, 14-23. Tide Water Associated, which is interested in certain of the Pacific Western leases, also holds an interest in leases on Secs. 31 and 32, as well as on Sec. 5, which is west of current development.

Operators do not as a rule have much water trouble in the field unless they drill too far into the Point of Rocks sands, which are several thousands of feet in thickness and are interlarded with water sands.

As of July 5th Pacific Western was moving in to begin drilling Midway-McKittrick No A-21-30 and No. A-35-A-30, and Veon No. 86-A-24. At the same time it was drilling Midway-McKittrick No. A-31-30 below 7300 feet, in the gas sand, and Midway-McKittrick No. A-54-30 had run casing at 6040 feet.

Ohio Oil's Tulare Fee No. 4 was drilling below 6200 feet, and Tulare Fee No. 5 was drilling below 6500 feet. Union Oil's was almost at completion depth at 6700 feet with its C. C. M. O. No. 87-24, which may hold surprises for its neighbors. Thus the three principal operators had a total of seven drilling projects under way as the month began.

Which brings us to the $64 question: "Are Belgian Anticline wells likely to prove profitable?"

Several wells in the field have already produced $1,000,000 worth of oil and gas. Union's C. C. M. O. No. 84-24 producer put out, under restriction, 81,000 barrels of 36 degs. gravity crude in 107 days. Its Jewett Fee No. 83-63 well, completed since the No. 84-24 was turned into the tanks, has already produced 54,000 barrels of petroleum.

Four UOP Platformers Scheduled for Early Start

One more UOP Platforming unit has just gone on stream and three others are scheduled for start up this month. These Platformers are located in three countries and on two continents.

A 3,800 barrel per day unit was placed on stream June 30 for Canadian Oil Refineries, Ltd., at Froomfield, Ontario. Other units scheduled to go into operation within the next few weeks include a 4,400 barrel per day unit for Atlas Processing Company at Shreveport, Louisiana; a 1,500 barrel unit for Bitumen & Oil Refineries, Ltd., at Matraville, New South Wales, Australia and a 900 barrel unit for Petroleum Specialties, Inc., at Flat Rock, Michigan.

The Canadian Oils and Bitumen units are the first Platforming units to go on stream outside the continental limits of the United States, although six others are scheduled.

The 900 barrel per day unit for Petroleum Specialties is the world's smallest Platforming unit, although at least one 500 barrel unit is projected.

Each of the units is designed primarily for motor fuel production. Operation of these four units will raise to 15 the number of Platforming units now in operation. Total output of these units is estimated at 40,000 barrels daily. Another 19 units are now in various stages of design and construction.

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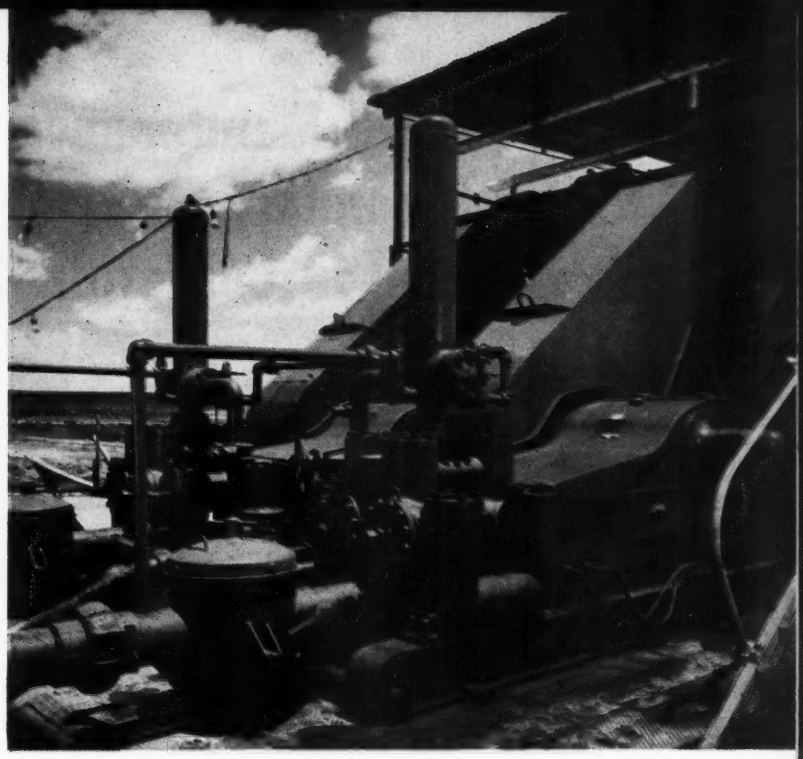

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The Design and Maintenance of Water Treating Plants for Secondary Recovery and Waste Disposal in California

ABSTRACT:

This paper contains information pertaining to methods of treating waters that are now employed in the California oil fields for secondary recovery and water disposal.

Section I—Methods of design.
Section II—Chemical treatment.
Section III—Corrosion.
Section IV—Initial cost of a 3,000-barrel per day treating plant.
Section V—Operating costs of a 3,000-barrel per day treating plant.

INTRODUCTION:

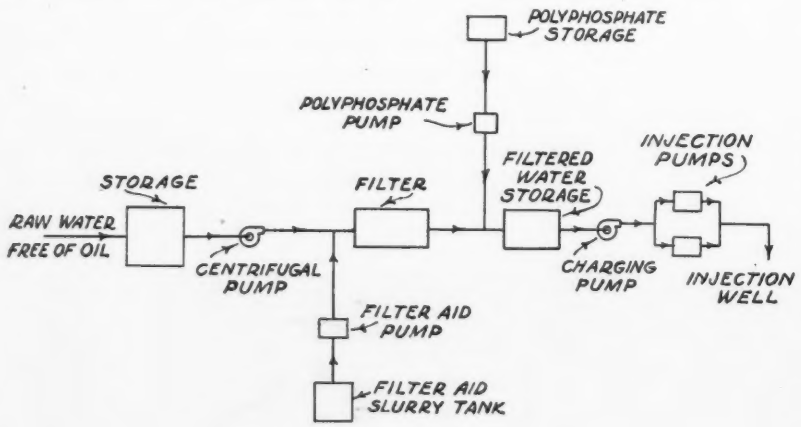
The treatment of oil field brines for waste water disposal and secondary recovery is becoming an ever increasing problem in California. Not long ago, California oil operators were troubled very little with the disposal of brine water that was produced with the oil. The water that was produced could be put in open sumps and evaporated. Other operators were close to sewers into which they could dispose of the water. Now, in the late life of many of these fields, more water is produced than oil, which results in an

By R. T. WHEELER
Union Oil Company of California

ever increasing problem of water disposal. As the sewers are becoming more heavily loaded, restrictions for governing the oil and solids contents of the effluent are becoming more severe. City, County and State regulations prohibit unlined sumps for fear of poluting fresh water sands and, therefore, the operators have been forced to build their own disposal lines to the ocean or to inject the waste brine into non-fresh water formations. A few operators are using their waste brine for secondary recovery by injecting it into the producing formation to drive the remaining oil to the producing wells.

The plant for treatment of this brine in order to be able to inject it into the formations will be discussed in this paper under the following headings:

I—Methods of Design
II—Chemical Treatment
III—Corrosion
IV—Initial Cost of an Average Treating Plant, and
V—Operating Costs of an Average Treating Plant.



SCHEMATIC FLOW DIAGRAM
3000 BBL./DAY INJECTION PLANT

FIGURE 1.
RTW 4-10-52.

I—METHODS OF DESIGNING A WATER TREATING PLANT:

First, just what is desired from a water treating plant? The answer is simply a clean effluent that will not plug the injection well or corrode the casing and surface equipment.

There are three types of systems being employed in California. They are the closed, semi-closed, and the open system. The closed system is one in which the brine water does not come in contact with air in the process of removing it from the oil before injecting it into the ground. The semi-closed system is one in which some part of the system is exposed to air. The open system is where the majority of the process is exposed to the atmosphere.

In choosing a system, many times the presently installed facilities dictate whether or not it is to be open or closed. For instance, where large skimming ponds are used for storage and oil separation, it is difficult and expensive to plan a closed system. If oil is removed from the water in closed tanks or taken directly from wash tanks or other forms of closed dehydrators, it is not difficult to design for a closed system.

The closed system has several advantages over the open type. Corrosion is minimized, air borne bacteria are excluded, dissolved iron is kept in solution, and hydrogen sulfide gas is not oxidized.

By the use of the closed system, oxygen from the air is not permitted to contact the water. Dissolved oxygen in a brine water presents a serious corrosion problem to the plant, pumps, casing and other equipment.

Air borne algaes of various types grow rapidly in the warm brine water in the presence of air. These bacteria must be filtered out in the cleaning process, and, therefore, represent an additional load on the filter.

In some instances where the brine water contains dissolved iron, con-

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Black teamed with Jim Sivalls and the two followed oil westward to join W. G. Bryson. The three set out to manufacture the best oil storage tank of that day. Increased oil production turned them to producing tanks of steel. The BS&B emblem became almost as familiar as the oil derrick. Today this is still true.

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tact of this water with oxygen will precipitate iron hydroxide. This floc represents considerable decrease in filter cycles. When dissolved iron is mixed with oxygen, the rate of reaction is slow, and unless sufficient time is allowed for complete precipitation, some iron floc will form after filtration.

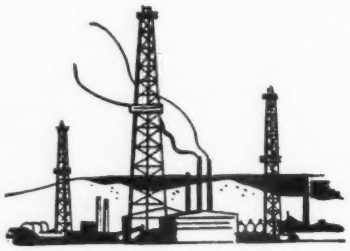
Hydrogen sulfide, usually the result of sulfide reducing bacteria, presents a serious corrosion problem. Contact with dissolved oxygen will increase the corrosion attack and will oxidize a portion of the hydrogen sulfide to free sulfur, which must be filtered from the water, thereby decreasing the filtration cycle.

The closed system will not assure a stabilized water. There has been some belief that if the water is stable in the formation, and that water is produced, kept in a closed system and injected, it is exactly the same water that is in the formation. This is not true, as both the temperature and pressure have been changed. By reducing the pressure, carbon dioxide, in equilibrium at a high pressure, is released when the pressure is decreased. Thus, a portion of the bicarbonate converts to carbonate, which is precipitated as calcium carbonate. This scale is familiar to most everyone in the production field. Temperature likewise affects the solubility product of the many salts contained in the brine water, so that a reduction in temperature can produce unstable supersaturated solutions. Therefore, a closed system does not insure a stable water that will not be scale forming.

The question arises—is it necessary to filter the water before injection? The answer to this is that it depends entirely on the formation into which the water is to be injected. There are a number of cases in California where water is successfully being injected into the formation without filtration, but in most instances, filtration is required.

After a decision has been made on the type of system to employ, and whether or not filtration is needed, it is necessary to choose the component parts of the plant. Filters, filtered water storage, and injection pumps are, in general, the large items that deserve attention.

Filters: Diatomaceous earth filters are being used in the majority of the water treating plants in California, and they have several definite advantages over sand filters. They require considerably less backwash water to clean the filter, and they can handle a small amount of oil that would, under the same circumstances, plug a sand filter.



The diatomaceous earth filters contain more filter area per unit volume than the sand filters and are, therefore, small and compact. In order to obtain a good quality effluent from a sand filter it is sometimes necessary to use some form of flocculation prior to filtration, and, when this flocculation treatment is necessary, diatomaceous earth filters are usually less expensive to install. The effluent of a diatomaceous earth filter usually has less suspended solids than the sand filter where extremely dirty waters are encountered.

Sand filters are economical and trouble free when they are operated under the proper conditions.

The type of filter generally being used in California oil fields is a horizontal tank equipped with vertical leaf type elements. This element has proved to be satisfactory under rugged use where high pressure drops across the elements are encountered.

An advantage to the horizontal type tank is its easy access for repairs or inspection.

For small installations, where there is a maximum of 200 barrels of water a day to be filtered, Plate and Frame type filters are being used successfully. These filters have disposable pads that are changed instead of backwashing, an operation which eliminates considerable piping and equipment.

The auxiliary equipment required by the diatomaceous earth filters are a charging pump, a slurry tank, a slurry pump and a precoat tank. The charging pump is used to supply the raw water to the filter and to precoat and clean the filter. The slurry tank is used to mix the diatomaceous earth with water, and keep it in suspension by gently stirring it continuously. A slurry pump, diaphragm type, is most commonly used for injecting the filter aid slurry into the raw water. In lieu of a slurry tank and pump, dry powder feeders have been used to inject the filter aid. However, they have not proved too satisfactory. The precoat tank is required for applying the precoat layer to the filter screens, and should contain approximately twice the volume of the filter tank.

Filtered Water Storage: The capacity of the filtered water storage should be the amount needed to supply the injection rate while the filters are being backwashed. If too much storage is provided, it allows time for unstable salts to precipitate and for different varieties of bacteria to grow. The ideal plant would be one in which storage is eliminated and the water injected immediately after filtration. This is being done in one of the installations. However, injection must be stopped during the backwash cycle.

Injection Pumps: The type of injection pump is governed by the pressure required to put away the desired volume of water. Most of the injection pressures are over 500 pounds per square inch, which requires positive displacement pumps. Horizontal slow speed triplex pumps are most widely used.

II—CHEMICAL TREATMENT:

Bacterial Control: Chemical treatment in the water injection plants has been, in general, confined to bacteria control and scale inhibition.

Bacteria have been comprehensively studied, and the information published, but for a brief review, they can be classified as anerobic and aerobic, but, for our purposes the algaes are the aerobic and the sulfate reducing bacteria, the anerobic bacteria. Where the algaes are encountered in open systems, chlorine is being used effectively. Sulfate reducing bacteria are more difficult to control. However, formaldehyde and quaternary ammonium compounds are reported to be successful.

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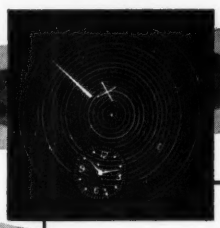

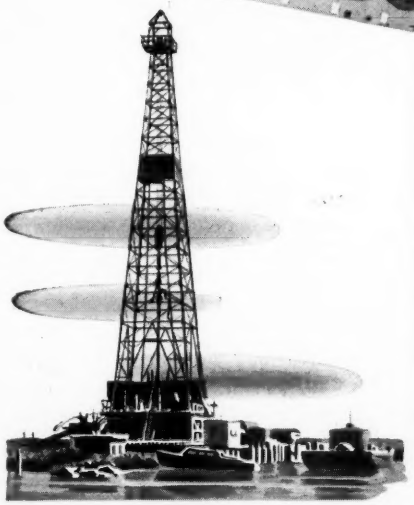

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Scale Control: Scale formation throughout the injection system and injection well is one factor that should not be overlooked when planning a treating plant, gathering and injection lines. Scale problems can be successfully combated for by designing lines so they can be easily cleaned, and by the use of chemical inhibitors.

In many cases, it is cheaper to design lines to and from skim ponds with the least number of bends as possible so they can be easily cleaned by pipe line cleaners. Flanged fittings are desirable, as they can be readily removed to permit the entry of the cleaning equipment. It is also good practice to avoid burying lines, if possible.

There are many chemical inhibitors on the market of the polyphosphate type which are designed to inhibit the formation of scale in the pipes and in the injection wells. These polyphosphates have one disadvantage which, in some cases, could be serious. The polyphosphates revert to the orthophosphate, as the temperature increases, forming a precipitate in brine waters of calcium orthophosphate. This material would be a more serious plugging agent than the one treated for. However, temperature surveys of injection wells show that bottom hole temperatures are only a few degrees above the initial injection temperature, and are low enough so that a serious revision problem is avoided. There have been no instances reported where a well has been plugged by calcium orthophosphate.

If it has been determined that a water is definitely scale forming, frequent injectivity index tests can be taken on injection wells to determine whether scale is plugging the sand face. It should be kept in mind, however, that scale is not the only factor that can change the injectivity index.

The majority of the injection plants are using some form of scale inhibitor in their injection water.

TABLE 1.
THE INITIAL COST OF A WATER TREATING PLANT FOR 3,000-BARREL/DAY WELL REPAIR AND SURFACE LINES

Equipment	Cost
Filter (200-ft.²) (Monel)	$10,500
Filter aid tank	700
Precoat tank	400
Valves	1,500
Chlorination equipment	2,000
Meters	600
Phosphate injecting equipment	400
2—Centrifugal charging pumps	1,025
Clean water storage tank, including protective coating	1,000
2—Triplex pumps with engines	17,586
Electrical equipment	2,000
Pipe, pipe fittings, concrete	3,000
Paint	2,000
Labor	5,000
TOTAL	$47,711

TABLE 2.
OPERATING COSTS OF A 3,000-BARREL/DAY WATER TREATING PLANT

Electrical costs @ $.01/kwh		
Filter charging pump, 7½ h.p.	$ 1.35	
Injection charging pump, 1½ h.p.	.24	
Mixer on slurry tank, 1/3 h.p.	.06	
Polyphosphate pump, ¼ h.p.	.05	
Chlorination heater	.20	
Lights	.05	$1.95
Gas fuel for injection engines		7.05
Oil for injection engines		.50
Maintenance for injection engines		2.50
40 lbs. of chlorine @$.0475 per lb.		1.90
5.4 lbs. polyphosphate @ $.17 per lb.		.92
100 ppm. of Filteraid @ $.0475 per lb.		4.75
Precoat		.40
		$19.97
2 hours labor per day @ $2.50 per hour		5.00
		$24.27
Operating costs excluding labor and maintenance	= .665¢ per bbl.	
Operating costs excluding maintenance only	= .816¢ per bbl.	

III—CORROSION:

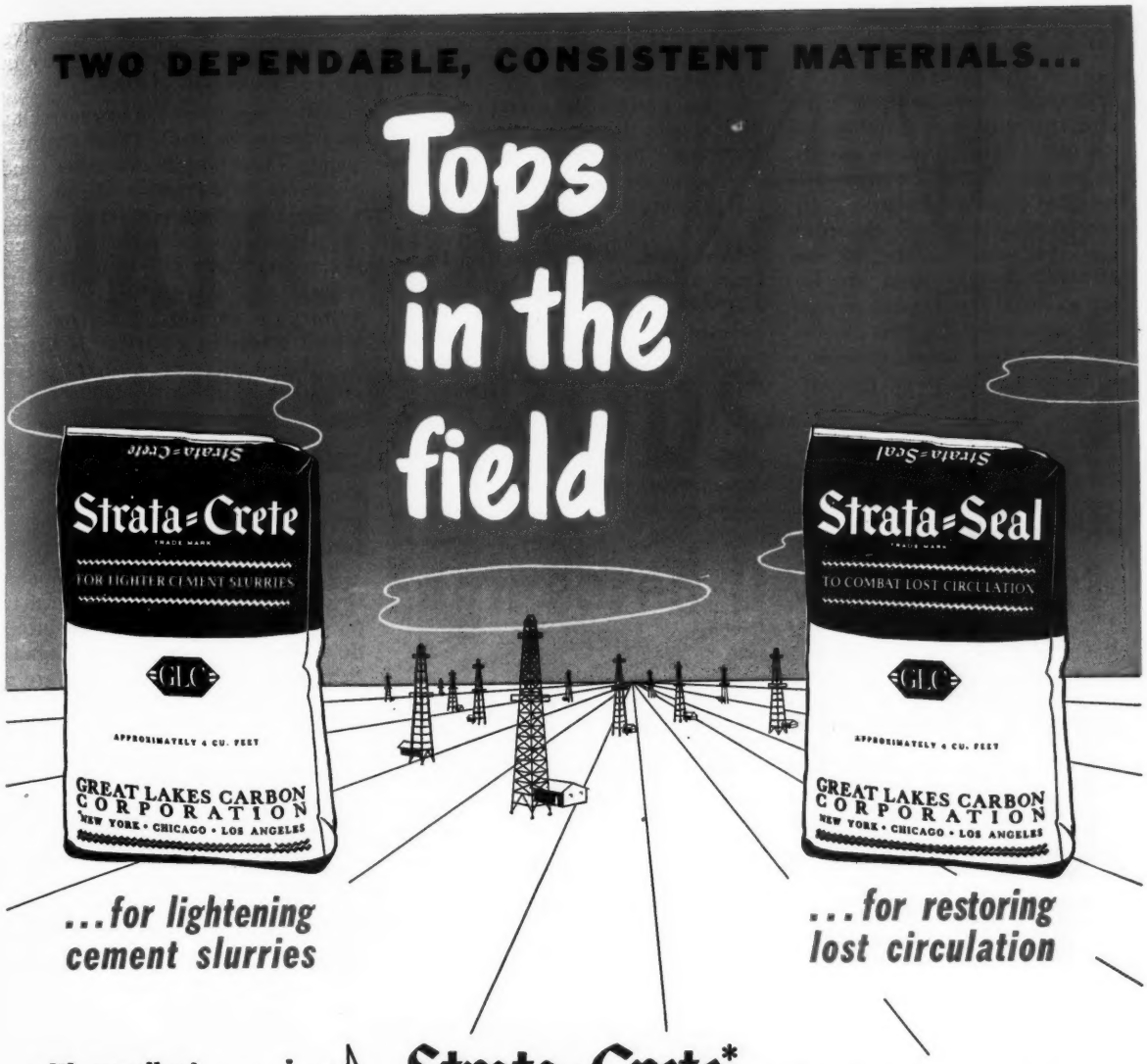
In general, it can be stated that the higher the salinity of the brine, the higher the corrosion rate, and corrosion is the chief cause of expensive maintenance, replacement and shut-down time.

In designing a brine treating plant it should be kept in mind that the equipment is to last for the life of the flood, or, if a disposal project, for the life of the field. The petroleum engineer, in his original calculations, will estimate the cost of a treating plant, amortize the investment over the expected length of the flood, or a reasonable number of years. He will also estimate the cost to treat and inject a barrel of water. Unusually high maintenance and replacement costs are not figured into the proposal, and must ultimately come out of expected profit. Long shut-down periods caused by corrosion, lengthen the flood life and thereby materially reduce the profits.

The factors coupled with high salinity that cause severe corrosion are dissolved oxygen, hydrogen sulfide, dissimilar metals and high velocities.

Dissolved oxygen is not present in waters that are produced from oil bearing zones, but is absorbed into the water usually in skim ponds or while going through other surface treatments. Probably the easiest way of solving this problem is by the use of a closed system which keeps the air from contracting the water. There are instances, however, where this method cannot be accomplished, and mechanical or chemical deaeration can be used to eliminate this source of trouble.

Hydrogen sulfide is often present in California brines, and usually gives rise to a difficult treating problem. Hydrogen sulfide and dissolved oxygen cannot be present for long in the water at the same time as the hydrogen sulfide is oxydized by the oxygen. Eliminating sulfides is a costly operation as oxygen must be added either by means of air or in a chemical oxidizing agent. If oxygen is added, then the excess must be removed to eliminate a corrosion problem. A bacteriacide should also be added to prevent the anaerobic sulfate reducing bacteria from converting more sulfate to hydrogen sulfide.



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Dissimilar metals in contact, can be a serious source of corrosion. For instance, a steel pipe connected to a bronze pump, pressuring a brine water of 18,000 parts per million of chloride ion, will last about a month. Insulating the dissimilar metals will prevent this type of corrosion by blocking the flow of electrons through the metal. Some of the methods commonly used are insulating gaskets, plastic pipe, or rubber hose separating the two metals.

High velocities cause corrosion attack by sweeping away the corrosion products and leaving the bare surface exposed for further attack. Products formed in the corrosion reaction protect the metal from further attack, depending on the metal involved. This type of corrosion can be minimized by installing ample capacity of piping.

Corrosion Mitigation by Initial Design: Considerable down time and expensive maintenance can be avoided by proper engineering and design of the water plant. The correct choice of filters, injection pumps, storage facilities, valves, pipe fittings, and pipe will pay out in a short period of time.

Filter equipment is expensive and any corrosion would cause costly repairs. Therefore, in corrosive conditions, it is advisable to install a unit made of monel, stainless steel or plastic. Monel has excellent corrosion resistant properties in brine waters, and has proved very satisfactory in service. Stainless steel, which comes in a variety of grades, will stand up very well. However, considerable thought should be given to insure that this metal will remain passive in the service encountered. Plastic as yet, has been used very little in this service, but will probably be used more in the future.

The majority of the companies are using horizontal slow speed triplex injection pumps with bronze fluid ends, for protection against corrosion. Bronze fluid ends are reported to resist corrosion in severe service, and coupled with porcelain plungers, this type of pump should give good service for the life of the flood, with minor maintenance. Stainless steel plungers are in wide use at the present time. However, in some cases, the packing has scored the plungers, necessitating having them faced with a harder metal.

Raw water and clean water storage can be handled in wooden tanks, concrete pits or plastic coated steel tanks, which give good service against corrosion attack.

Valves are one of the major items in a treating plant. Sticking or leaking valves require considerable maintenance which can be eliminated if a suitable type is installed at the onset. Diaphragm valves have proved to be very successful in several cases as all working parts are protected from the corrosive water by a neoprene diaphragm. In some applications, three way plug valves have proved successful in minimizing the time required to backwash. However, in corrosive water, they freeze up making them inoperative.

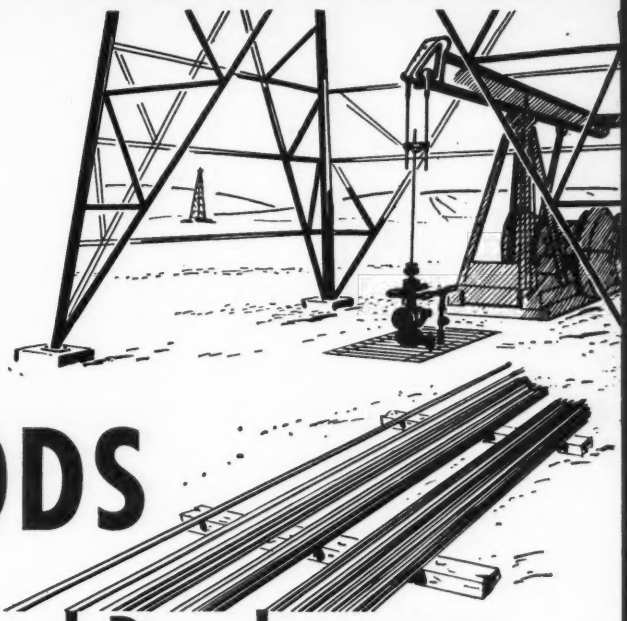
In choosing pipe fittings, welded flange connections will give longer service than screwed fittings, because replacements can be made rapidly with little or no loss in down time. Corrosion attack is more severe in threaded fittings because of

TABLE 3

Project	Date Started	Vol. Inj. Day	Type of System	No.of Inj. Wells	Press.	Approx. Depth	Surface Pipe	Cost of Initial Install.	Treat. Cost ¢/Bbl.	Bacteria Control	Scale Control
1	5-48	5850	Open	1	515	4,000	Cement	$34,750	0.6	Chlorine	Polyphosphate
2	11-51	162	Semi-closed	1	950	1,670	Steel	18,000	2	Arquad 2C	Polyphosphate
3	2-52	60	Semi-closed	1	185	3,450	Steel	23,000	2	Arquad 2C	Polyphosphate
4	4-51	1000	Closed	1	550	3,700	Steel			None	Polyphosphate
5	1-45	3398	Open	2	2,600	7,700	Transite				None
6	9-49	2650	Closed	1	2,250	5,700	Steel				None
7	12-50	600	Closed		400		Steel	8,600	0.63	None	Polyphosphate
8	6-52	6000	Open	1	50	300	Cement lined	50,000		Chlorine	Polyphosphate
9	11-49	3850	Closed	2	1,500	11,500	Transite	45,000	1.85	Pur-O-San	Polyphosphate
10	8-50	1200	Closed	1	700	4,000	Transite	50,000		None	None
11	7-51	1500	Closed	1	200	5,600	Transite			None	Polyphosphate
12	2-47	4200	Open	4	Vacuum to 1,800		Cement lined		2	Chlorine	Polyphosphate
13	3-44	800	Open	3	800		Transite		2	Chlorine	Polyphosphate
14	11-48	400	Open	1	to Vacuum 1,800		Steel		1	None	None
15	11-50	175	Open	1	1,650		Steel		1	None	Polyphosphate
16		4000	Open	1	450		Steel		0.25	None	None
17	11-50	2000	Closed	2	300	3,300	Steel	20,000	0.5	None	None
18	11-47	13500	Semi-closed	3	1,200	3,500	Steel	80,000	0.5	None	None

TABLE 4

Project	Oil Removal	Injection Pump	Metal In Fluid End	Filter
1	Sump	Positive Displacement	Cast Iron	Sand
2	Skimming tank	Duplex	Bronze	Plate and frame
3	Skimming tank	2 Stage centrifugal	Bronze	Plate and frame
4	Skimming tank		Steel	Diatomaceous earth
5	Ponds	Positive displacement	Steel	None
6	Ponds	Positive displacement	Bronze	Sand filter
7	Skimming tanks	Positive displacement	Monel	Diatomaceous earth
8	Skim pond	Centrifugal	Bronze	Diatomaceous earth
9	Skim pond	Positive displacement	Steel	Sand filter
10	Skim tanks	Positive displacement	Bronze	Sand filter
11	Skimming tank	Positive displacement	Steel	Diatomaceous earth
12	Flotation	Positive displacement	1 - Steel 1 - Monel 3 - Bronze	Sand filter and diatomaceous earth
13	Skim ponds	Positive displacement	Steel	Diatomaceous earth
14	Skim ponds	Positive displacement	Bronze	Diatomaceous earth
15	Excelsior box	Positive displacement	Bronze	Diatomaceous earth
16	Skim sumps	Positive displacement	Steel	None
17	None	Positive displacement	Steel	Diatomaceous earth
18	Skim pond	Positive displacement	Iron	None



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concentration cell attack in the excess threads that are not made up. Leaking in a screwed joint is almost impossible to stop unless the entire fitting is replaced.

If it is determined that the brine water is corrosive, many dollars can be saved by the use of seamless pipe. Lap and continuous weld pipe corrode along the weld, limiting its length of service.

IV—INITIAL COST OF OPERATING A 3,000-BARREL A DAY TREATING PLANT

Initial operating costs are difficult to obtain so let us assume, for example, an average water treating problem for California.

We have 3,000 barrels of water per day to treat and to inject at 1,500 pounds per square inch, and we wish to filter this water, which contains 100 PPM of filterable solids. This brine also requires an algaecide, and is scale forming. In these cost studies assume again that the oil has been mostly removed by skim ponds or similar equipment.

In choosing the size of a filter, it is approximately correct to assume that the maximum capacity will be one (1) gallon per minute per square foot of filter area, and the normal operating condition will be close to one-half (½) of this amount. On the basis of this figure, a 200-square-foot filter would be required.

The entire cost of a treating plant, including the injection facilities, would cost approximately $47,700. To double the volume of water treated would cost approximately one-third more. The schematic flow diagram, 3,000-barrel/Day Injection Plant is shown in Figure 1.

Table 1 showing the itemized cost is self-explanatory.

V—OPERATING COST OF A 3,000-BARREL A DAY WATER TREATING PLANT

Operating cost data is difficult to obtain and the accuracy often dubious. Table 2 itemizes the power, chemical, and labor costs necessary to operate a plant treating 3,000 barrels of brine water a day. The assumptions used for estimating the cost data are the same as previously stated.

It is interesting to note that for a plant using this method of treatment, the chemical and power costs .7 cents per barrel independent of the volume of water treated. Maintenance costs are not shown, except for the injection pump engines, because it is almost impossible to foresee what difficulty will be encountered.

Included are Tables 3 and 4 which show the type of water treating plant and equipment presently in use in California and Table 5 which shows the Geo-Analysis of the various waters being treated.

ACKNOWLEDGMENTS:

I wish to express my thanks to the California operators who supplied the information that made this paper possible and to the Union Oil Company of California for permission to publish this paper.

The assistance and encouragement of Mr. Milan Arthur and Mr. Charles Smith, both of the Union Oil Company, and Mr. Fenton Fowler, Chairman of the A.P.I. Secondary Recovery Committee, Pacific Coast District, have been invaluable.

Presented at Spring Meeting A.P.I. Los Angeles.

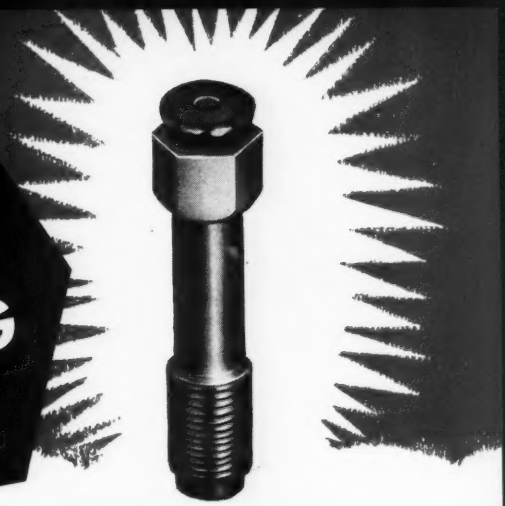
TABLE 5

GEO-ANALYSIS OF CALIFORNIA INJECTION WATERS

Project	pH	Na & K	Ca	Mg	Ba	Sa	NH_4	Fe & Al	SiO_2	Cl	CO_3	HCO_3	SO_4	B_4O_7	I
1	7.3	11,153	1650	643				Trace	38	21,800	-	293	Trace	58	
2	8.3	5,211	136					Trace	53	8,200	9	226	33	169	32
3	7.4	8,582	522	95				Trace	20	14,100		305	71	234	16
4	7.6	9,830	380	290	40	20	25	25	30	16,200	-	760	320	50	
5	-	-													
6	-	-													
7		875	70	86				2	58	117		842	-		
8	7.5		255	64				43		7,216	-	537	273		
9	-	-													
10	-	-													
11	-	-													
12	7.4	10,807	620	239				16	20	17,892	0	1008	5	10	
13	7.5	4,630	143	41				37	48	727	14	494	6	0	
14	7.1	4,403	8222	55				14	20	21,240	0	291	144		
15	6.8	6,982	6303	0				0		21,691	0	347	0		
16	-	-													
17		4,650	57	33						5,858	0	2537	50		
18		3,245	45	51				50		4,246	0	1415	76		

LP Gas Prices Remain Stable

Although living expenses have skyrocketed in practically all major categories, the cost of liquefied petroleum gas has advanced only 7 per cent since 1942. This was brought to light by the LP Gas Information Service of Chicago, following a countrywide spot survey among leading marketers of the fuel. In the same ten-year period from April 15, 1942, to April 15, 1952, the average of all items included in the cost of living index compiled by the U. S. Bureau of Labor Statistics jumped 63 per cent. Food prices registered the sharpest gain with a 92.3 per cent rise. Other increases were as follows: house-furnishings, 69 per cent; apparel, 60.2 per cent; miscellaneous, 54.6 per cent; fuel, electricity and refrigeration, 39.3 per cent; and rent, 28.6 per cent. Since the Government Bureau's figures are based on information supplied from 34 major cities, LP gas is not represented in either the average cost of living index for all items or in the fuel, electricity and refrigeration classification. LP gas is used mainly in rural, small towns and suburban areas and is also known as butane, propane and bottled and tank gas. Industry leaders attribute the stability of rates of this gas in contrast to the general rise in living costs to a number of factors. Among them are: the tremendous growth in public acceptance and use of the fuel with resulting distribution economies, the sharp increase in number of LP-gas bulk plants over the country and consequent reduction in the area served by each, the "incentive" rates offered to customers by most dealers to stimulate the use of new appliances, and by various technical and service advances contributing to greater efficiency and economy.



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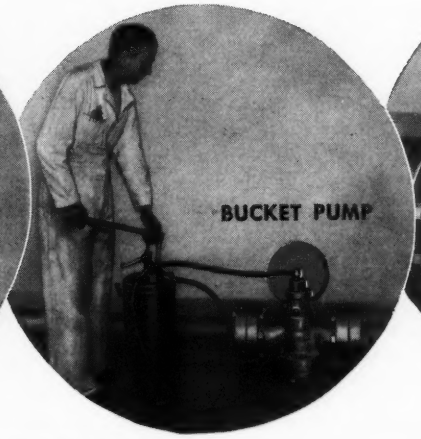

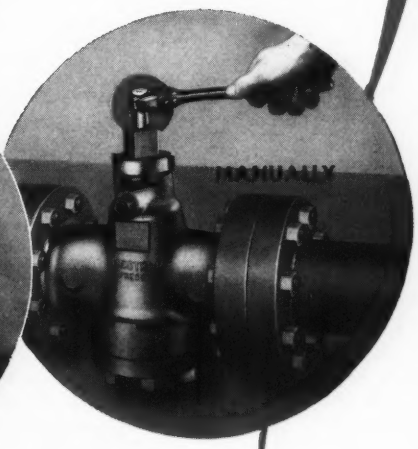

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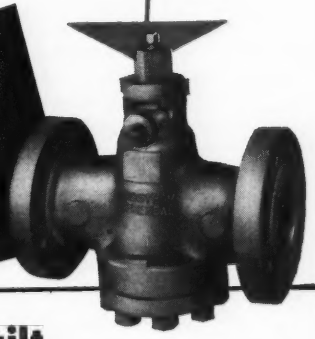

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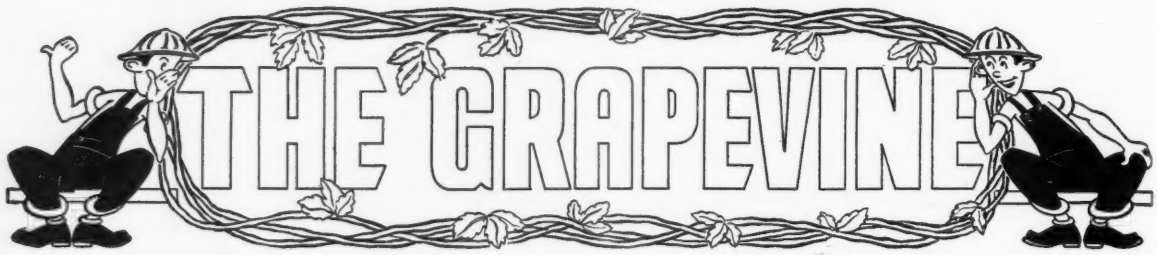


There is deep and dolorous lamentation in the House of Heater these days and the air is viscid with gloom, for the brave little Macadamian nut tree, of which we have several times spoken here, has given up the ghost and gone to its fathers. Nothing is left to remind us of a fruitless five-year struggle but the pathetic patch of disordered earth in which the poor thing long strove for a decent existence. Bill Heater, the gallant Baroidian, bless his sympathetic soul, never gave up the effort to resusciate this pallid daughter of Macadamia. When her chlorophyll count was low, Bill suffered untold agonies; when, as sometimes happened, a faint glow of health exhuberant beyond words. Despite his ministrations, however, the frail flowerlet moulted and shrank until she was plainly bound for that bourne from which no traveler ever returns.

Bill was frantic with concern. It was his anxiety, indeed, that finally proved her undoing. Seeking to provide the tender touch that might turn the tide, he hired a private nurse—a Swedish gentleman who was supposed to be unusually familiar with his horticultural hormones. Maybe he was, but he was obviously quite unfamiliar with the outward appearance or inner feelings of a Macadamian nut tree, for the first thing he did when he arrived was to yank this one ruthlessly out of the ground and toss it on the compost heap. Then he made a clearing around a husky dandelion beside which he sat solicitously for three or four days. By the time Bill was aware of this botanical blundering, the little foreigner had sighed gently and rolled over. And so, in a sough of unutterable sadness, ends the saga of the Macadamian nut tree.

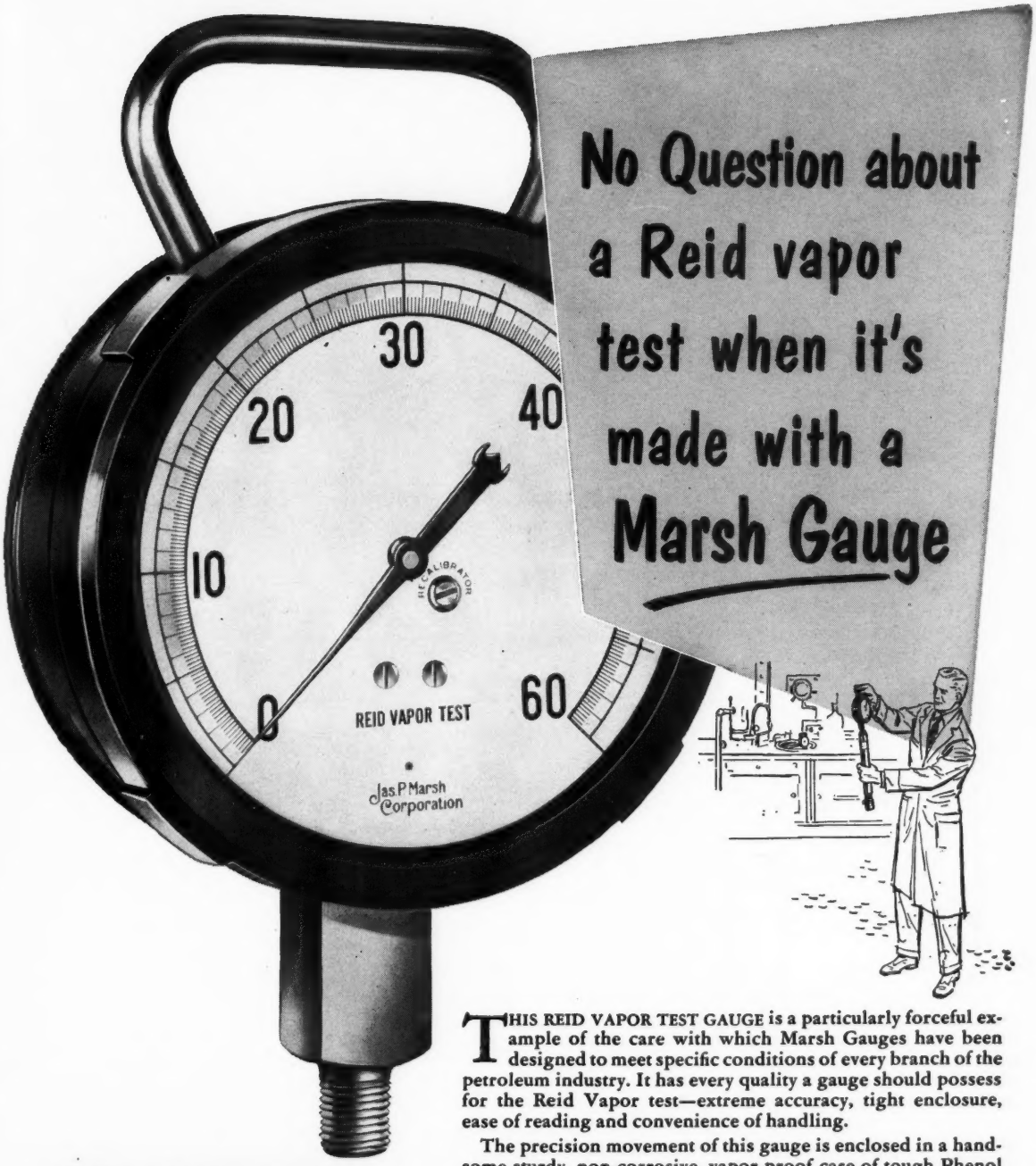
We hear tell that Bill Pemberton, the noted explorer, is back from the African wilds with some mighty interesting trophies. An especially exciting one is a photograph of a new chapter of the Desk & Derrick Club recently organized—By Pemberton himself, we suspect—in Ituri Forest in the Belgian Congo. The gals up in that area differ from our petrolic secretaries in two quite pronounced frontal aspects but these are not mentioned in a respectable magazine of this sort. It is sufficient to say perhaps that the Ituri lassies are obviously unfamiliar with the word "uplift" or else pendulousness is a tribal must. Anyway, Bill took a striking photograph of the Ituri chapter of D & D and if you should happen to get a squint at this bit of ultra-revealing art, you will know at once whereof we speak.

We teamed the other day with Peg Whealton, one of the sharpest domino players in these here regions, against Elmer Wycoff, the National Tube tile tosser, and Paul Andrews, the PPP historian. The result of this debacle is something we would rather not talk about, it is too painful. Elmer gave one of the neatest performances we have seen in many a day. Right from the first round he was on top of us, feinting with his left and pegging with his right at every opportunity. Time after time he drove us to the boneyard with his blocking tactics and lashed us with a flurry of fives till we were groggy. Then, just by way of a change, he would skirt round end and scamper for home, leaving us flatter than a layer of gold leaf. The cost of this entanglement was terrific and we are certainly thankful for the Government's easing of the down payment percentage and its extension of time on subsequent payments.

Had an interesting chat with Ray Teal, the Union Oiler a short time ago and found him little altered from the lad we first knew away back when. There have been some changes, of course, for we learned that the little gaffer who used to tag around with a tight hold on Ray's hand, ready to bet that his daddy could lick any daddy in the world, is now Dr. Teal, a practising dentist up in Utah somewhere, and Teal Major is prouder than a **cum laude** grad at a college reunion. In our younger days we engaged Ray in some fierce philosophising on the ways of this wicked old world and if we do say so ourself as hadn't ought, we did some right smart rationalizing and deducing. Anyway we can recall many pleasant exchanges with Ray Teal and his associates in forms and printing and we are certainly hoping that the end of this comforting association is a long way out in front.

We have been missing Jimmy McNeill, the Irish thrush, from around the petrolic circuit lately. The noted balladeer is now, we understand, a considerable adjunct of the Tevis Morrow institution and must be very busy for he seems to have abandoned the rathskellers completely. Jim is a cheerful sort of a lad who knows more songs than Dinah Shore and most of them, incidentally, were old old songs before Dinah was born. On the slightest provocation, he organizes a thing called a quartet which there after is devoted to a species of sonic disturbance, boastfully termed "harmony." The members of the quartet usually assemble in embarrassingly close formation, breathe deeply in each others faces and, under the McNeill impetus, shatter the welkin no end with sporadic wails of choral dissonance. But, after all, it is good clean fun, and it is to be hoped that Maestro McNeill will soon again be frequenting his old haunts and flaunting his old habits.

E. C. "Ned" Brown, the capable prexy of Brown Drilling Company, is now operating in Western Aus-



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tralia for Caltex and there soon won't be a part of the world anywhere that hasn't been penetrated by one or other of the Brown drilling crews. Al Dysart, who will be in charge of the Australian job, went down a while ago with Carl Newcomb, the Caltex exec, to look over the operating territory and size up the transportation problem. It is pretty much in the wilds and when the boys come back they should have some interesting stories to tell about the kangaroos, wallabies, and koala bears, not to mention the duck-billed platypus and the platy-billed duckypus. There are more strange animals in Australia, believe it or not, than there are in Washington, D. C.

We received an invitation from our good friend, Earl Cammack, the Richfield pipeliner, to attend the next meeting of the Western Pipe Liners Club at Lakewood on July 17, and we shall certainly do our utmost endeavor to be on hand so that we can report the doings in a later issue. This is a mighty fine organization and we have very pleasant memories of previous visits with the lads who juggle the dynes and poises. Jack Pate, the well known cow puncher, is current president; E. L. Dreyer is vice president; and Earl Cammack is secretary. We are looking forward to seeing Frank Coyle wield his niblick, and to exchanging greetings with Howard Robinson, Alex Robertson, Norman Anderson, Fred Simms, E. L. Adams, and a raft of other pipeline greats whom we haven't seen for many moons.

All of this reminds us that we had an enjoyable session with Fritz Karge, the well known transportation engineer, the other day, and got quite an education on recent developments. Fritz now lives at Corona del Mar—when he gets a chance, that is. Lately he has been over in Turkey and down in Venezuela and altogether is busier now that he is supposed to be retired than he was when he was supposed to be working. He tells us that Ralph Rosborough, the former Union Oiler who made a sackful of kale in stock investments, has sold his nice house in San Clemente and he and Leah are now vacationing in Alaska. Fritz is going to show pictures of his foreign travels at the Lakewood whingding and we are looking forward to seeing that as well as to exchanging greetings with some fine people.

THE WEEPING WILDCAT

Over the past 20 years or so, it has been our good fortune to have frequent meetings with William Stokes Eggleston, chief petroleum engineer for Union Oil Company, and a mighty likable sort of a chap by any species of measurement. Bill, as he is better known, is a native of Helena, Montana, but in his formative years came down to University of California and graduated therefrom with a B.S. in mining. For a couple of years following that he was attached to the old Pacific Oil Company, later absorbed by Standard of Cal. and then he went back to Berkeley and studied petroleum engineering.

He began work with Union Oil Company as a geologist at Fort Collins, Colorado, in 1926 and has remained one of the 7600 ever since. He was down in Venezuela with a Union subsidiary but returned to California in 1929 as petroleum engineer in the Dominguez district. After a further stint in the same capacity at Santa Fe Springs, he was appointed assistant chief petroleum engineer in 1931 and in 1935 was moved uptown as oil development engineer. He became chief petroleum engineer one year later and still holds down the diverse responsibilities of that elevated post with distinction.

To such technical institutions as AAPG, API, and AIMME, Bill has long been a liberal contributor of time and talent. A year and a half ago he was named consultant to the director of naval petroleum reserves and made two interesting exploratory trips to Alaska in this connection. He is an active and enthusiastic member of Petroleum Production Pioneers, the Petroleum Club, and the Wildcats. For the last specifically he has done yeoman service as a thespian of high order and his weeping roles in the Christmas play have wrenched the flinty hearts of a raft of extremely callous oil men. For diversion and exercise combined, Bill rides the range on his faithful pony, "Nifty," the while he drinks in great drafts of California ozone that are required to consume his endless energy.

Ted Miles, the Continental Consolidated executive from Long Beach, has just returned from Europe where he visited with his famous brother-in-law, Norval Myers, director of the Anglo-American Oil Company, Ltd., in London, England. Norval has charge of European refining operations for the Company and one of his immediate and considerable interests is the plant at Fawley, near Southampton which is the largest refinery in Europe. They are an interesting pair these relatives. Ted Miles is an erudite but quiet mannered chap who is loaded to the gills with classic information and is also well primed on more material matters. He is a studious individual; is a sparkling conversationalist; and is one of the finest traveling companions you could possibly meet. His sense of humor is as keen as a ham slicer and he has stored in his memory a repertoire of rare situation comedy on which he draws appropriately and amusingly when the occasion is right.

Norval Myers is a different type—he is a go-getter. He is big, confident, intense, ambitious, and clever in a more modern sort of a way. He has an excellent academic background and knows how to make good use of it. Despite his drive, however, he is a good mixer and thoroughly enjoys meeting people. His hobby used to be, and probably still is, pipe smoking with all its accoutrements and concimitants. He selects his pipes and tobaccos with such meticulousness that the process becomes almost a religious rite, and in the act of smoking obviously enjoys something more than mere pleasure. That, too, is more of a rite than a routine. And now that we have dilated so generously on his proclivity, we shall no doubt receive a postcard from England one of these days announcing that he long ago stopped smoking.

Since the good old days when knights tilted in full panoply for the delectation of their lovely ladies, nothing in the sports line has caused such a commotion as the cribbage

Oklahoma City, Okla.

Dear Boss:

You wanted to know how Lufkin Pumping Units have performed in Oklahoma. Here are a few examples from the Oklahoma City Field:

	Well "A"	Well "B"	Well "C"	
		"A"	"B"	"C"
Well Number:		Sept., 1935	March, 1936	Dec., 1935
Date Unit Installed:		136,500	132,300	134,400
Hours Operated, Total:		1,108,719	1,009,414	987,280
Fluid Pumped (bbls.):		6,500	6,500	6,500
Well Depth, in ft.		$18.20	$38.60	$41.10
Yearly Repair Cost:				

Although these three records are remarkable, there are hundreds of Lufkin Units in Oklahoma with equal, or better, records.

Cordially Yours,
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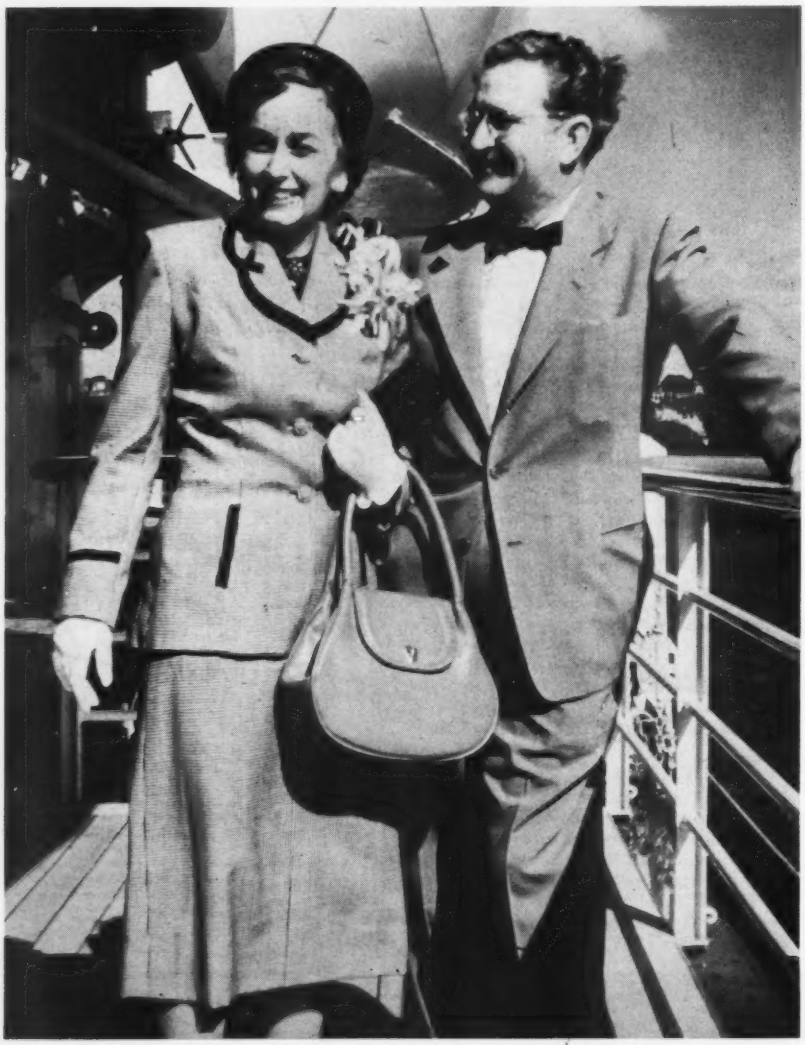
tournament now raging in the Petroleum Club at the Biltmore Hotel. We use the word "raging" advisedly for the thing has assumed the proportions and velocity of a major storm. The prime movers in this odd epidemic are Wilbur Rankin, the unattached paleontological champ and Roy Barnes who bears the banner and shield of Continental Oil Company. So many went into this forensic foray that the entry had to be divided into two segments, designated as the Roughnecks and the Roustabouts. As of the moment, the dangerous contenders in the Roughneck bracket are Paul Broxon, the Western Gulf barrister, and Glen Ledingham, the geological gillie from the same clan. Leading the Roustabouts and looking like a very good bet to cop the laurels in their half is His Nobs Roy Barnes, the Continental nobleman.

The atmosphere around the Club quarters from noon until one-thirty each weekday is literally stiff with the epithetic screams of the losers and the triumphant giggles of the winners. As in dominoes, there is a constant debate as to whether the game is just a wild gamble or has some vestige of science to it and the proponents of the respective attitudes debate their views with unabating vehemence. In any case, this particular donnybrook is furnishing diversion, if not relaxation, to busy people who need it and who probably wouldn't get it, if someone wasn't willing to organize a contest in which, although the competitive urge still gets an opportunity for exercise, the results are completely inconsequential—in a big way, that is.



Pictured aboard the American Export Lines S.S. Independence are Mr. and Mrs. Frank L. LeBus, Sr., President, LeBus International Engineers, Ltd., Wichita Falls, Texas and Chairman of Board, LeBus Rotary Tool Works, Longview, Texas. Mr. and Mrs. LeBus sailed from New York June 11th on a two month tour of Europe at which time he plans to establish European outlets for his products. They plan to visit Italy, Austria, Germany, Holland, Belgium, England, France, and Switzerland before returning to U.S. late in August.

Now, by way of last minute roundup, we dropped into Doug Graham's office at Long Beach the other day and found that he was off on a business trip to Colombia. Doug is certainly piling up the mileage as he pursues the somewhat uneven tenor of a drilling contractor's way. We regret to learn of the death of W. J. Dunlap sometime in May. He was a real old timer in the oil fields. Last we knew of "dad" as they called him, we believe he was pumping for Pacific Western up in the Poso Creek area.

The new PPP roster book is just about to come off the press and should be ready for distribution any minute.

Henry Salvatori is still over in Europe and will probably take in the Olympic Games at Helsinki before returning to Los Angeles. Archie MacDonald is back from his round-the-world jaunt and looks fit as a fiddle. With Hans Ross, Gil Nesheim Lev Sacre, Jay Perrin and sundry other Nineteeners, we enjoyed a mess of Archie's smoked albacore at the San Gabriel Golf Club recently and it was sure good. Which is all for now, cheerio, and next issue we hope to be able to give you the sordid details on the Nomads Whingding which is really the father of all whingdings.

Members of Western Oil and Gas Association's wildcat committee had their day at Hollywood Park. Skilled in locating new oil, the wildcatters struggled to spot winners among the racing thoroughbreds. Those on hand included Bob Lytle and Red Aubert, both horse owners in addition to successful oil producers.

More than 250 contractors and guests honored A. W. Thompson, American Association of Oilwell Drilling Contractors president, at a dinner party at the Houston Club, Houston, Texas. The principal speaker was Dr. George Benson, president of Hardin College, Searcy, Arkansas.

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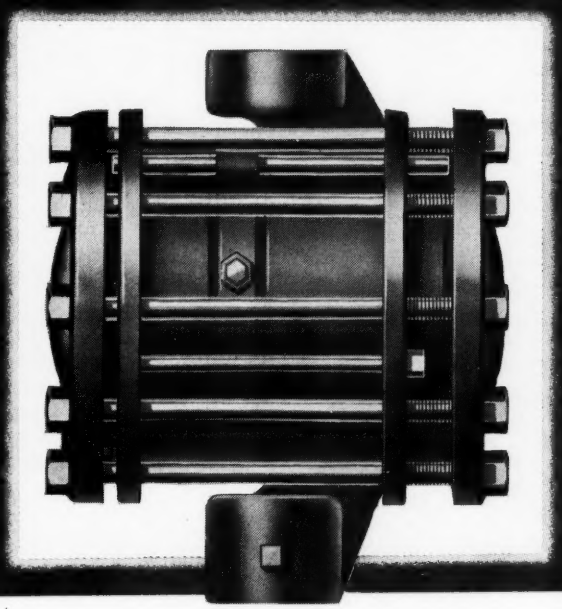

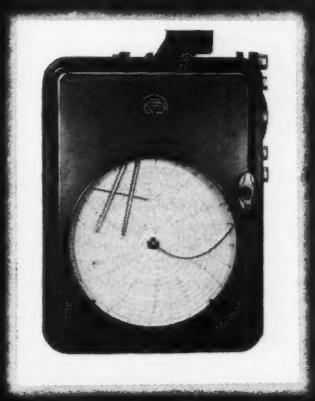

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Kern County OIL NEWS

Steel shortages have already bothered some. In many cases some planning has postponed programs, in others revisions have been exercised. Dry holes in exploration have deferred some needs. But the exploration goes on in Kern County in a manner, the like of which has never before been seen. It would appear that some steel demand backlogs may result pronouncedly until production is normal even if the strike is settled this month.

OILWIG SOCIAL SEASON is terminating, but the most important news this month has been the "rare air of June" . . Not a day over a hundred . . . some kind of a record month for delightful weather. The kind oilmen do not want to do anything about. Meetings and barbecues, even weddings are in short supply after a new record in each event.

FREEDOM OF INFORMATION in recent oil industry advertising and report of meetings is a welcome policy always. In appreciation for those who "never had it so good" this information is valuable to use in distinguishing the difference between political and economic science.

PUT THIS IN YOUR HATBAND: Drilling risks in 16 wells develop some oil. One out of 53 finds a small field; one out of 330 finds a medium field, and one out of 991 finds a major field. This is accordingly information that Kern oil gentry are looking for. Such public relations is needed everywhere, particularly in Kern County.

MANY YEARS AGO Kernoilwigs found out how an independent oil company could hold its own, how little grocery stores and supply people could do the same. SUCCESS of the free enterprise system depends upon how well little business makes up big business . . . the action which gets things done.

COMMENCEMENT IN JULY makes our graduation a little tardy when compared with late spring valedictorians. We are home at last not merely good as new, but "better than ever." As one of seven who took the Miley method our graduation had little fan fare. We had a lot of "TLC" and are much the better for it. As we leave the Solarium out in the blue Pacific two miles west of Golden Gate we are impressed with many contacts afforded us by oilmen and oilwomen who take part and are interested in the industry. DR. JOHN PAUL BEALE in charge of the eye clinic goes around kicking his shins when he sees us, because his great grandfather was too hasty in disposing of the Tejon Ranchos. Had he waited a hundred years, "JP" thinks he would have had a stake in the Eocene sand at Wheeler Ridge.

OILTANKERS amount to about every other ship passing in the swift current out beyond our view north of the lighthouse, from where we sat.

CORINGS . . . upon our return we noticed that quite a few tours had gone under the derrick. See where the geological personnel keeps up its annual and semi annual changes. JOHN WELLS is missed from Elk Hills and we think we saw him in San Francisco. TENNENT BROOKS seems to have gone out to Elk Hills. There were many more . . . these we remember. Saw BILL QUINN pushing the crew out at Soco's KCL-2 356. He's a half mile east, we should say, of the Richfield discovery and south of "Wheeler." Are making a date with C. W. Gibbs the general superintendent out Taft way to get more dope on not a "NO DOPE" hole.

P.S. the Northern Oil Scouts are meeting in Yolo County at the Flyers Club July 25, according to the

THE '52 SCOUT BARBECUE: ROY ALEXANDER, The Texas Company; FLOYD TINCHER, Union Oil Company; JOHN RAY, Conservation Committee; BOB RIST, Monterey Oil Company; LANNY GRAFF, Standard Oil Company of California; and BOB TORREY, Southern California Gas Company (left to right) San Joaquin Valley Oil Scouts gathered North of the Kern River near Hart Memorial Park after a round of golf, for the usual Bar-B-Q followed by bridge.

Before you buy any rotary slips, make this point-by-point comparison

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are outstanding for safety, convenience, low maintenance!

Yes—before you buy *any* rotary slips, carefully check through the features outlined here. Then, make a point-by-point comparison between Baash-Ross "DU" Rotary Slips and any other make on the market.

Only by making such a comparison can you fully appreciate why "DU" slips are today's outstanding buy for maximum safety, convenience and all-around operating economy.

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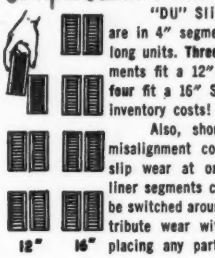
Note the deeply-cored backs in "DU" Slips that eliminate dead metal, replacing it with scientifically-designed cellular ribs that combine more-than-ample strength with minimum weight. **Result**—low total weight figures like these . . .

Size of "DU" Rotary Slips	"DU" Regular (12" Long)	"DU" Long (16" Long)
4½" O.D. Slips with 4½" Liners	135 lbs.	158 lbs.
5 9/16" O.D. Slips with 5 9/16" Liners	143 lbs.	177 lbs.
7" O.D. Slips with 7" Liners	152 lbs.	196 lbs.

Compare Low Maintenance!



"DU" Slip Liners are in 4" segments—not long units. **Three** 4" segments fit a 12" slip . . . **four** fit a 16" Slip. Cuts inventory costs!

Also, should table misalignment concentrate slip wear at one point, liner segments can easily be switched around to distribute wear without replacing any parts.

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In "DU" Slips all body portions are unitized together by a unique "floating" hinge that maintains rigid **vertical** alignment—yet permits free **lateral** adjustment to compensate for wear or misalignment in bore of master bushing. All body segments set together and take the same uniform grip at all times, even though pipe is off-center or crew is inexperienced. Safeguards pipe, cuts round trip time!

Compare Adaptability!

With "DU" Slips you don't need a separate slip for each size of drill pipe. By simply changing the liners—a quick inexpensive operation—only 3 basic "DU" body sizes fit 14 different pipe sizes . . . in fact, all sizes of tubing, drill pipe and casing from 2⅜" through 7" O.D. Saves money on slip investment!

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Other "DU" advantages include safety loops on handles to safeguard crew's hands against injury . . . perfected grip pattern that will not damage the pipe . . . polished backs to eliminate sticking in the bore . . . flattened toes that enable "DU" Slips to stand solidly on table or floor . . . free-draining backs that permit full fluid drainage . . . rugged tops that protect against elevator impact . . . and many other important features that make "DU" Slips today's outstanding buy in rotary slips.

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"no dope" ahead of the barbeque policy. And Richfield Oil Corporation "picnic" for the employees was held the same day of the San Joaquin Scouts. How about a clearing house for events or are we too big.

POLITOKERN . . . three oilwigians made the grass roots central committees come last election. TOM WOODWARD, TOM THOMPSON, HERM WEDDLE, AND LARRY SEAMAN, that we know of on one side of the house. There were others.

TAXES WON AGAIN as Kern upped its new budget $3 millions. A lot of services were discontinued, but substitutions seemed as costly at budgets end. Salaries were upped to meet private industry for the most part of the big increase. So many other benefits superior to private employment scarcely, anticipated much more than a token raise this year. Many executives of the county were cooperative in budget slicing and in accepting changes, but hardship cases resulted in some severe sacrifices in such generosity. Our Asiatics misconstrue generosity for weakness, so we are told.

FIFTY YEARS AGO the Board of Trade was meeting very frequently, according to old dispatches presented us recently from 1902 letter files. After almost that time when BT's became unpopular Kern has a new one for '52.

REWARDED for safety in Kern County which was marked by lessening of fatalities in 1951 over 1950, and subsequently marked by a public presentation before the San Joaquin Valley counties assembled in May, June ended with a record of deaths on the highways. Franklin Lowney, executive secretary of the California Safety Council will feel very bad. He made the presentation in June a few weeks ago.

WASCO OILWIGS AND other cities tried to get a countrywide drive on for "death takes a holiday" . . . they were unsuccessful in getting civic groups to assist them. Captain Roy Galyen was called upon by a group of local oil people to take leadership as the oil industry always has. It is hightime something should be done and it is hoped the new committee will be successful.

COLONEL ARTHUR S. CRITES who calls himself an oilwig too, is a delegate to the GOP convention this month. As an alternate Ysabel Forker who says her brother is an oilwig, will also attend the Chicago event.

OILSCULTURE reminds us that Mrs. Fremont R. Schmieder . . . (Dutch's wife) of the Shell Oil Company interests, has been elected president of the Kern County Philharmonic Society. Our congratulations. That is something we like consistently touching upon. Money from taxes which go for cultural appreciation is never in jeopardy or contest from oilfolk who pay most of the taxes. Al Price was elected "vee pee" and on the board are Roy W. Loudon whose bees are subsidized by private enterprise by way of an oil lease, Mrs. L. D. Baisinger, Aram Adams and Miss Jean Baughman as new members at large. Ben Bolt is treasurer succeeding George Friesen. Charley Manley is the Jr. past president. Charley received an oscar in alabaster. Harry Gardner of Monolith Cement, Mrs. Keith McKee will also receive oscars later

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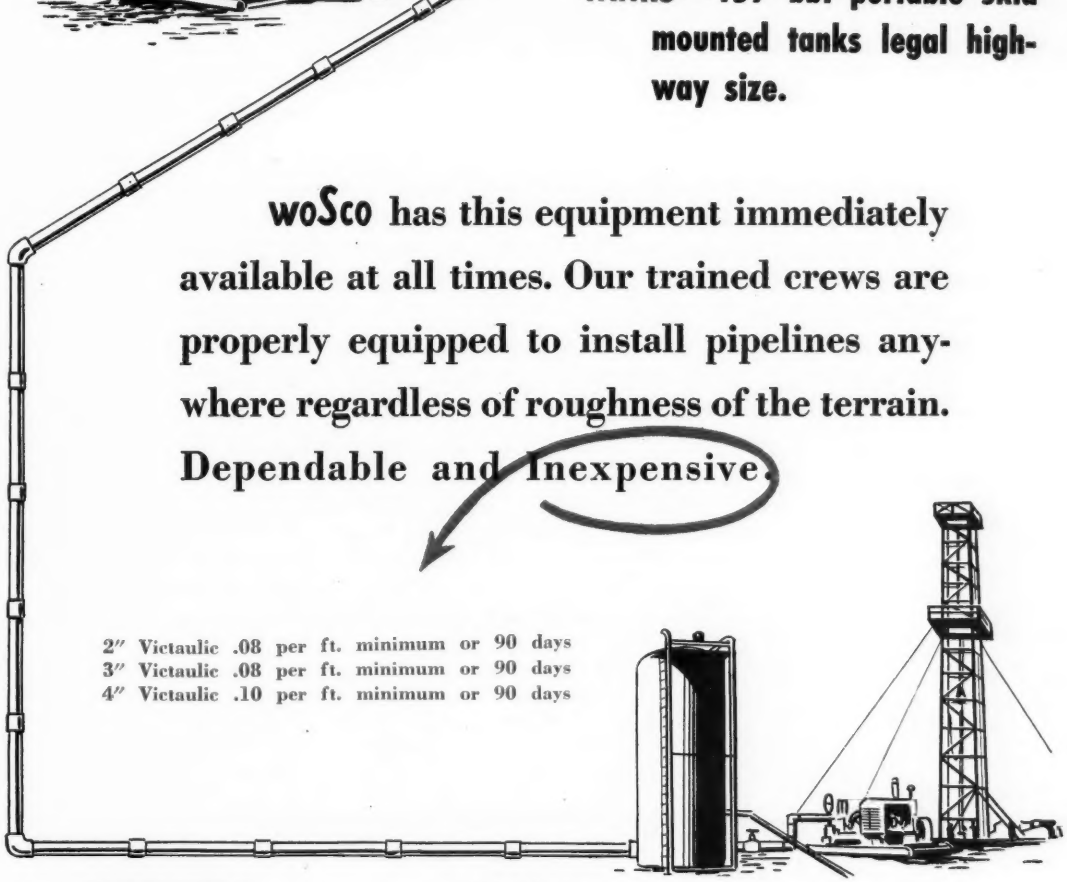

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WESTERN OILFIELDS SUPPLY CO.

They were the first two presidents. Mrs. Asa (Bank of America) Dimon presented a gift of polished silver dollars (she would think of that) to Chester Shuler who resigned as business manager. Thomas R. Reed succeeds him.

WESTERN GULF OIL COMPANY and its over 85 members celebrated the successful completion of a boring (?) schedule with a dinner party at the Crystal Inn last month. Everett Campbell, Luther Magee, and Ray Simmons reported on the goodfellowship night, and the bowling committee extended bids to attend an executive personnel meeting here and in Los Angeles.

PETROLEUM WIVES voted to assist the local county T.B. association in all its phases for the ensuing year. Mrs. Robert Buchanan is social service chairman, Mrs. William Lewis is president of the PWA. Mrs. Thos. Wilson and S. H. Sutliff are on the committee. X-ray and Xmas seals added to the rehabilitation chores, comprise a vigorous program.

IT SAYS HERE that Truxtun Beale was in town (Bakersfield) 50 years ago. He has been trying to sell his ranchos for several weeks. At the same time horses appeared on the street with straw hats, that's how long ago that was.

OILSTONES: Born a son, Mitchell William, to proud parents Mr. and Mrs. Kenneth R. Rolls of Taft.

Wedding Bells will ring for Adrienne Barnet and Earl Wimberly, who works for Gene Reid Drilling Company.

As the fiscal year ended for all of us, life on the same day ended for GORDON TRAILL, executive and assistant office manager for Standard Oil Company of California. Gordon was attending lodge when he was called by the Supreme Master. His wife Bonnie had just begun her year as president of the Bakersfield Women's Club.

June weddings made a record high for Kern since the second world war days a decade ago. Twenty four licenses were issued one day. It used to be more for the last day of the month. Kern is great on marriages and births.

Mr. and Mrs. Donald John Hall long friends of C.O.W. announced the wedding of daughter Sonja Margarite to Karl Richard Halbach of the Padre Hotel.

Made treasurer of the California Association of Insurance Underwriters was oilwig insuranceman M. E. BAIRD of Taft.

It is refreshing to know how Baird helped and cooperated in getting the big county employees insurance plan business divided up between local agencies who are substantial tax payers here. Oilmen are glad to see this happen.

Wedding bells soon for Jack C. Hall of Maricopa and Miss McGoldrick.

Oilbells will ring, if not already, for Miss Marriam Goertz and Everett A. Skelton.

Your hostess for newcomers in the oilworld of Kern, Dorothy Hiatt has become the wife of our good friend and yours, Mr. Everett Kroesch, popular realtor and insurer. OUR BEST WISHES.

WOMEN OILWIGS are flexing their importance in the industry of petroleum. Desk and Derrick Clubs all over this country are making good public relations impressions. Miss Margaret Shomat is president, Mrs. Bette Shearer, 1st vice president, in charge of programs, Miss Wilma Addington 2nd. v.p. in charge of membership. Miss Evelyn Applegate is recording secretary, and Mrs. Ruby Benfield is treasurer. Members of the board, are directors: Miss Kareen Anderson, Evelyn Fox, Mary Himebaugh, and Mazie Hyland. Miss KAY BARNES and BLANCHE KELLEY national and state officers installed the new officers here at Maison Jaussaud. A big barbecue was held July 1.

ROTARIANS returning from Mexico City who have called us up were among many from Kern County, Frank Hornkohl who reviewed some of the old places with us. He was impressed with our "south of the border" neighbors' hospitality, and their courtesy to all their North American fellow beings.

OILWIG GEORGE CAMERON from Texas plans for television here in Kern County at a most opportune time. A TV chain is to be developed covering the San Joaquin Valley's principal cities. J. E. O'Neill, Fresno rancher, was telling us that Cameron owned the only TV station in Oklahoma City and since selling it has wanted to enter fields of opportunity here. In addition to this application, Kern has a number of local applicants programming other stations here. Five radio stations in Bakersfield, one in Taft, Wasco, Delano are now located here.

TAXES TO BE LEVIED by Los Angeles on Belridge Oil Company production sold here has been held illegal by Judge Roy L. Herndon. It was a gross tax of 40 cents per 1000 dollars. It has caused considerable confusion in oil offices here

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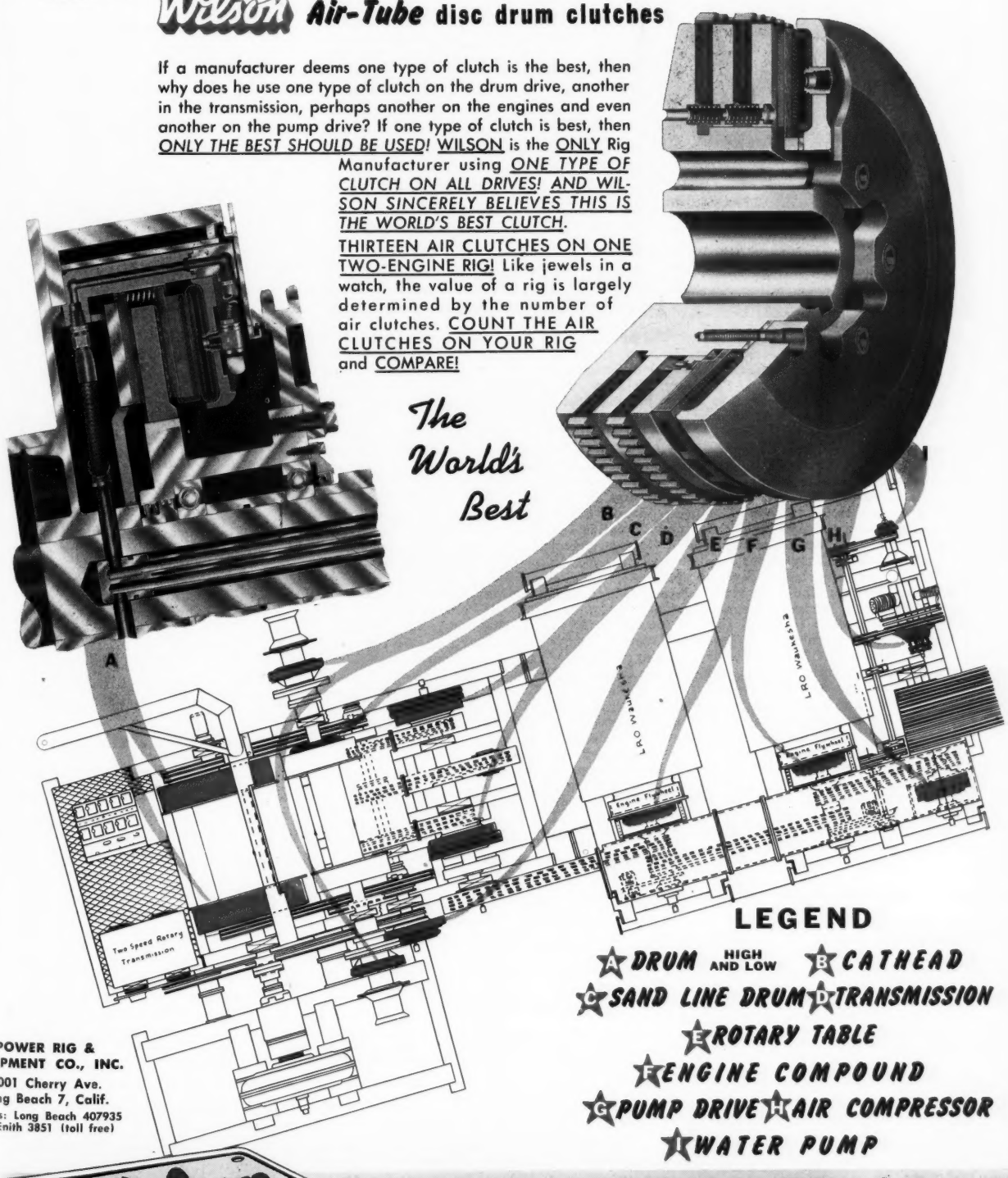

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and is being vigorously discussed on the derrick platform level with good reason.

MISSOILANY: Josh Hanks our good county assessor is doing some revision work over on the desert where hundreds of millions of dollars have been spent with a lot of Kern and California tax monies. Thousands of new persons have established residence at China Lake and Edwards Muroc fields. With county government costing over $2½ million per month, more than oilmen appreciate what is going on.

A barbeque was held for J. R. Mitchell and friends when he retired lately from Union Oil Company garage department.

R. M. (Bob) Pyles boys' camp contains one of Kern's own this season. Good for Bob and the boy too.

Bill Whitaker shot a 94 or about 20 under his flight. This is in response to numerous calls from "surveyors."

To King City from Kern County go a happily married couple of newlyweds, Miss Marjory Reese to Eugene Fisher Reid who works for Shell Oil Co.

From Miller & York comes word that their James D. Eskew took time out last month to wed Mary Lou Blakemore. They will live in Oildale.

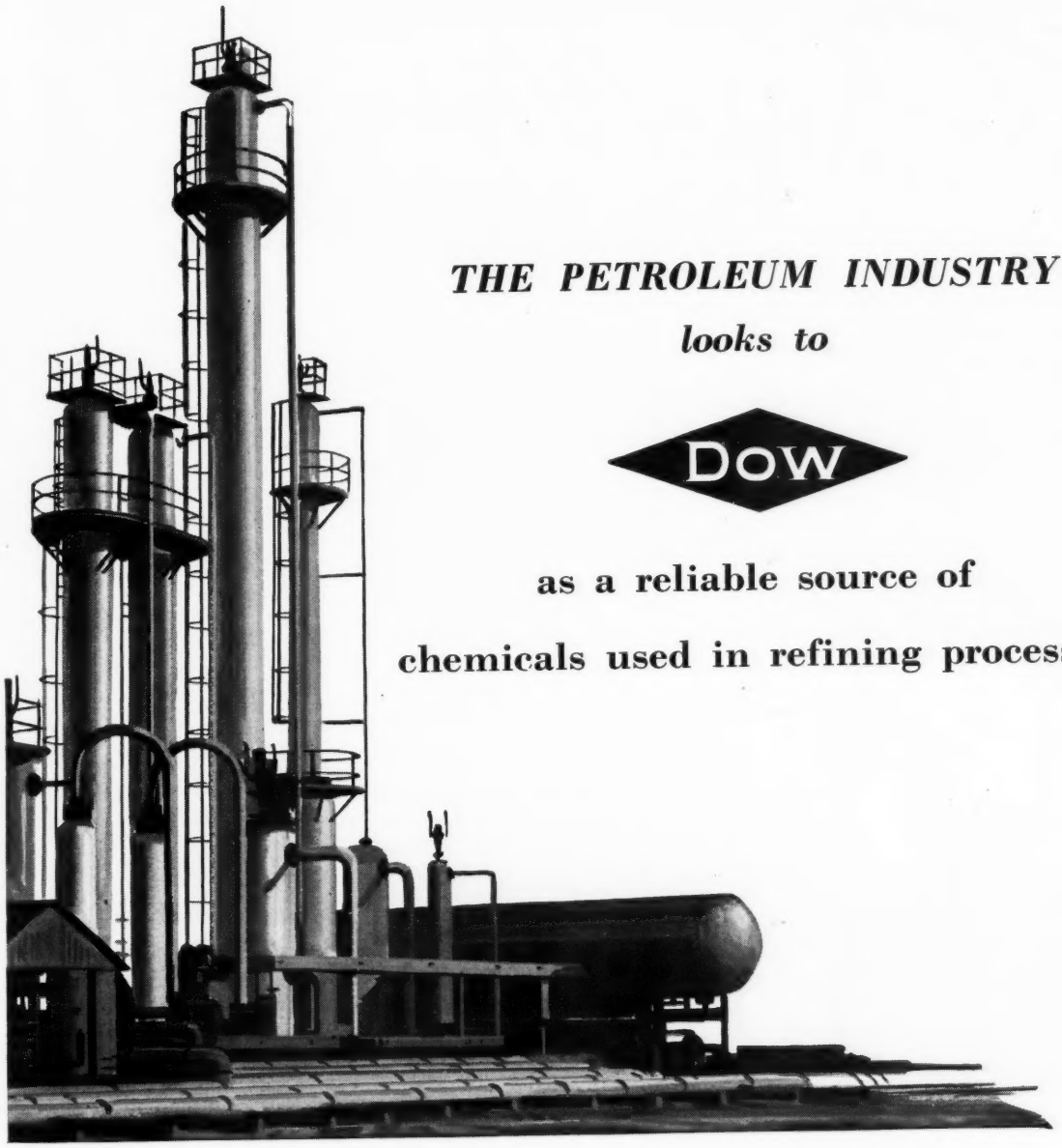
J. Danny McDaniel married Miss William Ruth Hinsdale of Cuyama, a Taft schools graduate. Danny is an observer for Western Geophysical Company and mighty well known by all the oil gentry. They are living in Tracy now.

Taft Industrialists in the oil business took up a collection the other night and dared a certain shirt manufacturer to move into a brand new building needed for about 80 employees, mostly women who want to help pay more taxes. Thirty men crew raised the money to build and may or may not get their investment back by a quick dollar, but it will help business.

ALWAYS SOMETHING DOING in Kern County. Every other day a new industry or business is opened up, sometimes an oil well comes in, in between the days mentioned. As we go to press a significant oil strike is reported here. Reserve Oil and Gas Company as you know, have had a fairly good interest in the areas around the Miocene discovery well by Richfield since its Eocene discovery well. Reserve is 12 miles away from the Miocene well, however. First test 1000 b/d with 36 gravity.

FIRST SOCIAL SECURITY claims to be filed under the new law of 1951 for agricultural farm laborers or workers were accepted by the local office here and they were from the Kern County Land Company.

MCKITTRICK BREA pits were dedicated last month as California Historic Landmark No. 498. This is a tribute to the oil industry and we like the idea since it is in Kern County. Up until recently most of the relics of 50,000 years ago that consisted of gigantic animals' prehistoric bones were claimed by Museums of other counties. It was right that Kern County should have a Museum activity or facility to acknowledge the large importance of these McKittrick pits.



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Personalities IN THE NEWS

Campbell Elected Pres. Of Franco Western

The Board of Directors of the Franco Western Oil Company of 3120 Eighteenth Street, Bakersfield, California announced the election of Mr. H. D. Campbell as President and General Manager of the Company, effective June 1, 1952.

H. D. Campbell

For the past three and one-half years Mr. Campbell has served the Company as Vice President in charge of production. Prior to that as a Petroleum Engineer and Superintendent. He is a graduate of Colorado School of Mines where he earned a degree in Petroleum Engineering.

The Directors also announced that the Company plans a substantial increase in its Exploratory activity.

Robert N. (Bob) Ayars of Ohio Oil has been transferred from Bakersfield, California, to Houston, Texas, as assistant division petroleum engineer. He calls Los Angeles his home.

Oil Conservation Committee Elected

The Conservation Committee of California Oil Producers held its annual election of officers at its organization meeting on June 25, 1952. Mr. E. J. Bartosh, of Bankline Oil Company, was elected chairman for the ensuing twelve months.

The Committee works on crude oil conservation in California on a purely voluntary basis and is supported by the oil operators. The district committee members are elected by vote of the oil producers in the State to represent the various fields and districts. There are 1130 operators with a total of 29,997 oil wells producing in California.

The other officers elected were: First Vice Chairman, C. A. Davis, of Richfield Oil Corporation; Second Vice Chairman, R. J. Stephens, of Kern Oil Company Limited; and Secretary, L. R. Rogers, of The Superior Oil Company.

The election of new officers follows the general election of district committees by oil operators throughout the state, which was held in May. The Committee is made up of the chairmen and vice chairmen of the 30 oil producing districts into which the State is divided. In addition, one representative-at-large was added to the elected membership.

More than any other pastime, photography appears to be the chief hobby of members of General Petroleum Corporation. It was in August, 1949 that the General Petroleum Camera Club was formed. Meetings are held in the company's building on the third Thursday of each month, except July and August. Present officers of the club are Paul Zimmerman, president; D. H. Powell and George Kelley, vice presidents; and E. H. Holland, secretary-treasurer.

Bob New Returns to California

Bob New, well-known long-time California oil operator, has made another sale of his interests.

Bob New

American Petroleum Company of Texas, owned by New, and which he formed in 1948 after selling out the Continental Companies in Long Beach, has sold all of its Texas properties to Columbian Carbon Company, New has announced. The properties consisted of over 20,000 acres of oil and gas land and wildcat leases in the State of Texas. The sale price was understood to be approximately $1,000,000.00, with New retaining substantial royalty interests.

Since selling out his interests in the Continental Companies in Long Beach, of which he was president, New built up the American Petroleum Company of Texas and culminated his Texas ventures in this sale. Also, during that time he became the largest individual stockholder in Pittsburgh Steel Company, and upon the re-arranging of Pittsburgh's finances, New sold out his Pittsburgh interests. He has returned to California to re-enter the

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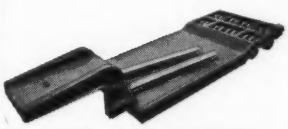
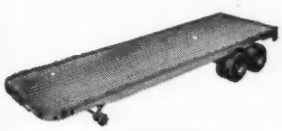

DOUBLE DROP CARRYALLS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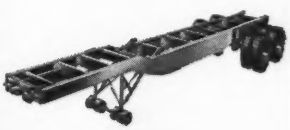
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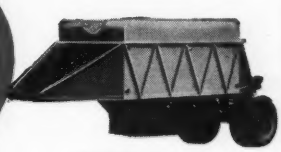
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oil business and has opened offices at Room 1102 National Oil Building, Los Angeles.

With Bob New as Geologist will be George Patterson Zebal, who was Stratigrapher for American Petroleum Company of Texas, and prior to that was Chief Stratigrapher for the California Company and was located in New Orleans. Also with New is Mrs. Florence Enright Hollendonner, who was his executive secretary at Continental Companies.

New's future interest will be directed toward Canada, Williston, and Wyoming, as well as California.

Burdette A. Ogle is a new member of the staff of William Ross Cabeen & Associates in the North Hollywood office at 12426½ Ventura Boulevard. Ogle formerly was with Shell Oil Company as supervisor of surface mapping for the Pacific Coast and Rocky Mountain regions. Earlier he worked with Union Oil Company and also taught geology at the University of California at Berkeley from which he obtained his PHD degree.

Robert F. Niven, Union Oil Company secretary, has been appointed to a top post in the Los Angeles Community Chest campaign organization. Niven will lead the Central Commerce and Industry division.

BILL GOERTZ RECEIVES AXELSON AWARD

SEVENTY-FIVE YEARS of Axelson is the combined record of J. C. AXELSON, President and General Manager of the Company and BILL GOERTZ, California Sales Manager of Axelson Petroleum Equipment Division shown above receiving 25 year service award. Bill is the 73rd man to receive the diamond service pin. 1952 marks J. C. Axelson's 51st year of active association with the company.

John V. Herasimchuk, general manager of International Gas Lift, S. A. of Caracas, Venezuela, is in the United States on a six weeks visit.

His company represents Camco Gas Lift equipment in South America and he spent several days visiting the Camco plant in Houston. He will go to Canada for the Devon Oil Show before returning to Venezuela.

A.I.M.E. Announces Speakers

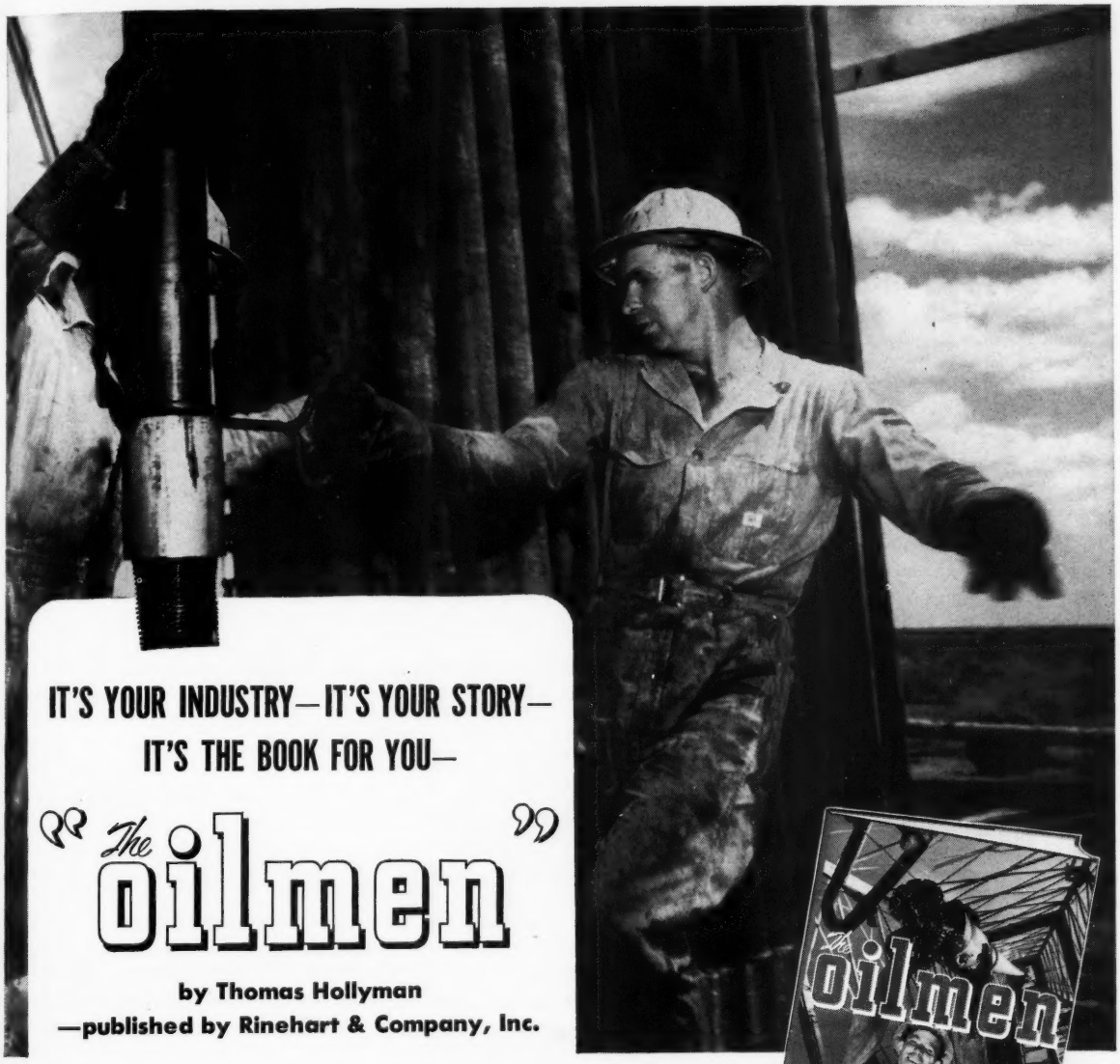
Six additional experts in various fields of petroleum engineering have been selected to appear on the Technology Forum of the Pacific Petroleum Branch, A.I.M.E., during the last half of 1952.

These men will address the group during the monthly meetings in the auditorium of the General Petroleum Building, Los Angeles. The panel includes M. B. Standing, California Research Corporation, who will speak July 28 on "Reservoir Fluids." He will be followed on August 25 by W. T. Cardwell, of the same company, whose topic is "Fluid Mechanics."

"Solution Gas Drive" will be covered October 27 by R. H. Smith, Signal Oil and Gas. "Natural Water Drive" is the subject of the final meeting of 1952. Union Oil Company's Norman Clark will cover this subject on November 24. The 1953 Forum will be opened on January 26 by Milan G. Arthur of Union Oil with a program devoted to "Condensate Production."

Non-members of the Institute are invited to attend these forums and a prepared outline of each subject will be distributed prior to the meeting.

LANE-WELLS HOLDS CONFERENCE. More than eighty executives and general sales engineers of Lane-Wells Company gathered in Oklahoma City on April 24 for the 1952 General Sales Conference. Plans for the coming year were presented by Jas D. Hughes, General Sales Manager and review of the past year's operations was given by Rodney S. Durkee, President.



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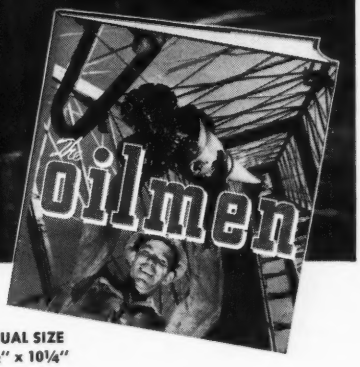

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Rocky Mountain NEWS

Colorado—Idaho—Montana—New Mexico—Utah—Wyoming—Western Canada

Western Canada

What is reported to be the largest gas well brought in on the Alberta Plains has opened up an entirely new field approximately 96 miles northwest of Calgary.

The discovery was made by Federated Petroleum, Ltd. and United Oils, Ltd. An extensive drilling program wil be undertaken to test the full possibilities of the area.

Federated Petroleum owns 75 per cent of the well, and United Oils 25 per cent. The two companies share similar ownership in 5,134 acres which surround it. In addition Federated and subsidiaries own 230 additional acres in entirety and 50 per cent in 160 acres in the area.

Federated United Nevis 14-2 obtained wet gas flows on drill stem tests up to an estimated 30 million cubic feet per day. Open flow is estimated at 150 mcf of gas per day. The well tapped 175 feet of wet gas pay zone in the D-2 and D-3 zones.

Some distillate also was recovered.

The well is 20 miles west of the Stettler oil field and is less than three miles northeast of Canadian Gulf's Lamper No. 4.

Canadian Bishop Oil, Ltd. has filed incorporation papers at Edmonton to take over Canadian operations of Bishop Oil Co. of San Francisco. Actual transfer awaits clearance by American and Canadian tax authorities.

Bishop Oil Co. has producing properties in California, Texas, Oklahoma, Kansas and Alberta Province.

Montana

Texas Co. has brought in an important wildcat in Rosebud County. Operator's No. 1 E. L. Grebe recovered 34.4 gravity oil and found considerable gas showings. Location is c nw nw 15-11n-32e and is between the Sumatra and Ragged Point fields. Production was from the interval 4,714-38 feet.

Principal Montana drilling interest continues to center on the eastern part of the state, particularly in McCone and Dawson Counties. More than a third of the active rigs in the state are operating in this area. Texas was testing a wildcat 11 miles north of its Cedar Creek discovery and had two other interesting tests in the intervening area. Shell found production in McCone County southwest of its Richey area discovery, which was the first Williston Basin success in Montana.

Demand for acreage in this section of the state continues high. Sinclair Oil and Gas Co. recently bid $101 per acre for 640 acres on the edge of Wolf Creek Dome structure in McCone County. The land is 15 miles northwest of the Richey area, which is in the extreme northwest of Dawson County.

An important test on the south rim of the Baker-Glendive anticline in eastern Montana has been undertaken by Shell Oil Co. at its No. 1 Little Beaver in Fallon County. Test found a good oil showing on drill stem test at 8,462-8,525 feet. Well was drilled to 8,553 feet total depth. Perforations were made at 8,474-8,525 in preparation to test. Location is c ne sw 13-4n-61e.

W. M. Fulton of Great Falls, pioneer Montana drilling contractor, receives life membership in the Rocky Mountain Oil and Gas Association at midyear meeting. Charles S. (Red) Hill of Denver, president of RMOGA, presents the membership certificate to Mr. Fulton. Left to right (behind table): A. F. Barrett, Casper, RMOGA vice president for Wyoming; President Hill; Walter G. Davis, Casper, secretary, and R. D. Smith, Great Falls, member of executive committee. Mr. Fulton is credited with drilling the first successful wildcat in Montana. He also has been active in pressing for legislation beneficial to oil and gas development in his state.

North Dakota

Six companies have made plans for wildcats in various areas of the Williston Basin, all of which would be tests to the Devonian. Deep Rock Oil Co. was preparing to test in Eastern Slope County, in the southwestern part of the state. Other companies planning tests are Stanolind Oil and Gas, Youngblood & Youngblood, New Concord Development, Union Oil of California, and Champlin Refining.

Eastern limits of the Beaver Lodge field were apparently established when Amerada found a duster at its No. 1 Nels Odergaard, c ne ne 33-156n-95w. Test was three and a half miles northeast of the Beaver

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Lodge discovery. The Madison was topped at 8,445 feet and the Devonian at 10,128. Well was drilled to total depth of 12,098 feet.

To the west of the Beaver Lodge field two interesting tests were in progress. Williston Basin Oil Venture was drilling in the Madison below 9,085 feet at its No. 1 Palmer, to the west. Champlin Refining, to the northwest of the Williston Basin Oil venture, was drilling below 9,730 feet.

No sensationally high prices were offered for tracts comprising approximately 23,000 acres throughout the state at Bank of North Dakota sale. Bishop Oil Co. bid $41 per acre on eight acres in McKenzie County. Average prices were much lower.

An important pipeline project for the Williston Basin has been announced by Service Pipe Line Co. J. B. Burke, president of the company, announced the line will be constructed in 1953 or 1954. It will tie into gathering systems in the Beaver Lodge field and will provide an outlet to a refinery to be built by Standard Oil Co. (Ind.) in the Mandan-Bismarck area.

According to present plans it will extend for about 170 miles from the Tioga area but the definite route will hinge on future developments. Service at present has a 20-mile gathering line in the Beaver Lodge field which serves a tank car loading rack at Tioga.

Wyoming

Developments in the Big Horn Basin are being watched with particular interest. The Husky-Wilshire No. 1 Govt., a stepout from the Husky No. 1 Torgeson in the Five Mile area of Big Horn County, may be drilled to the Phosphoria if no commercial production is found at upper levels. Well was being tested in the Second Frontier at the interval 9,875-9,914 feet. The No. 1 Torgeson was brought in as a gas discovery in the Phosphoria.

Seaboard Oil Co.'s No. 1 Ishawooa-State was drilled to 4,658 feet and being logged for formation tops before going on to the Madison expected at 6,000. A show of oil was found in the Dinwoody, which was topped at 4555 feet. The wildcat is on Tract 47 of 16-50n-104w, Park County.

Same operator recovered 90 feet of oil and 380 feet of water in another Park County test, the No. 34-16-P at Whistle Creek. Recovery was from the Morrison between 4,,473 and 4,505 feet.

Pioneer Oil and G. C. Parker plugged back their No. 1 Unit in South Sand Draw, Fremont County, for completion in the Frontier, which was topped at 4,555 feet.

Sinclair Oil and Gas Co. will drill a 10,600-foot Tensleep test in North Sand Draw, sw se sw 21-33n-95w. The well also will test the Mesaverde, Frontier, Lakota and Phosphoria.

In Sheridan County, McDermott & Co. brought in another producer in the Ash Creek field, the No. 2 Anna Trusler extension, nw sw ne 24-58n-85w. Operator recovered 1,350 feet of 34 gravity oil on 15-minute drill stem test. Well may be a better producer than either the No. 1 Barry discovery or the No. 1 Anna Trusler in this field. The No. 2 Anna Trusler was drilled to 4,395 feet total depth, and the pay zone was believed to be the Shannon.

The Navy, which has been drilling in the Teapot Dome reserve in Natrona County, abandoned its No. 1 TP-33 after drilling to 5549 feet in the Amsden. Some gas showed in the Dakota, topped at 3,710 feet. Another Navy well in this structure,

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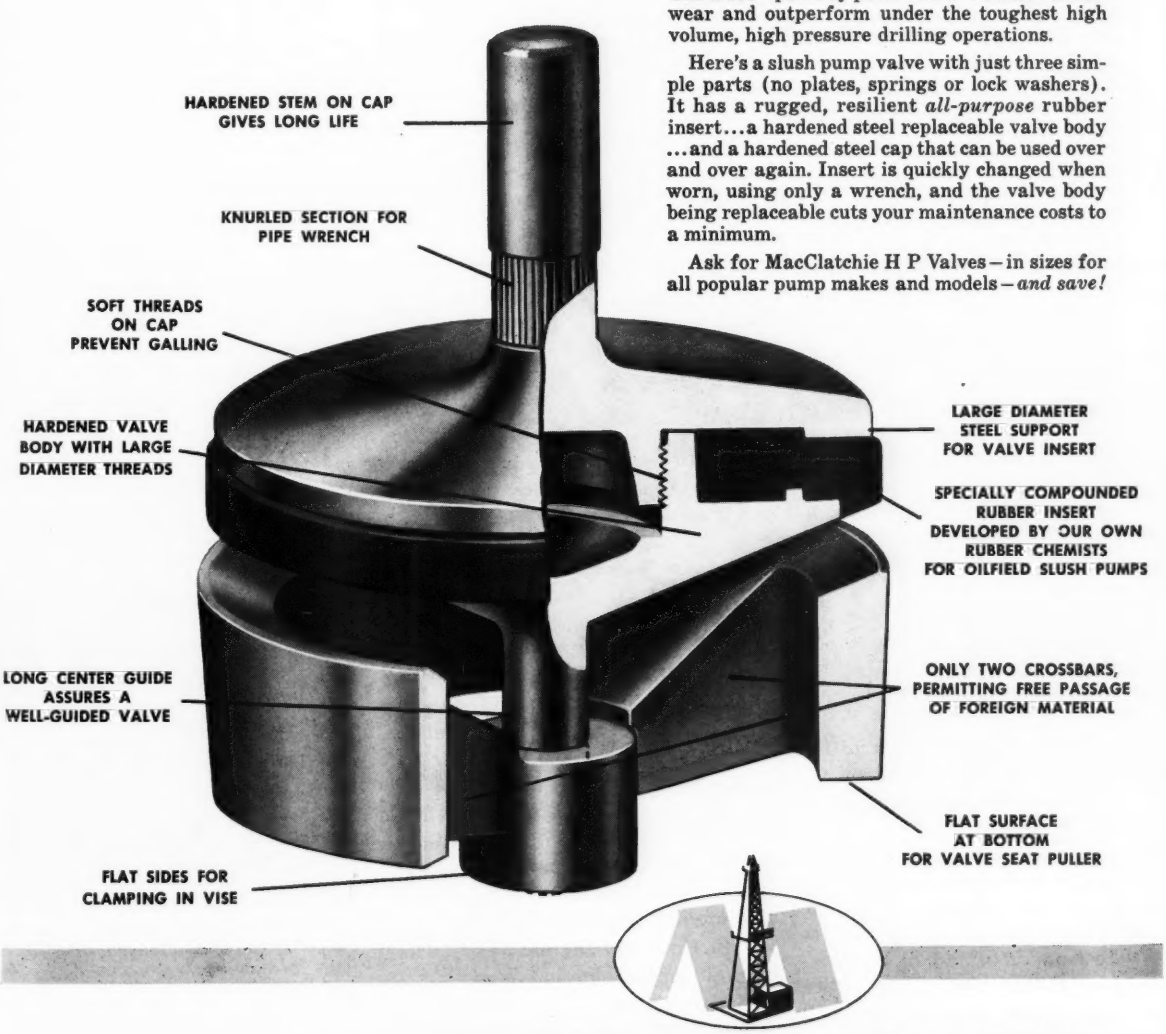
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the No. 1-G-10, recovered some oil from the Tensleep, with considerable water. Production tests have not yet been made.

Gulf Oil Co. has staked location for a wildcat in Campbell County, the No. 1 C. H. Davis at 34-51n-75w, in the Gillette area. It is scheduled as a 10,500 foot test of the Madison.

Trigood Oil Co. has completed its No. 1 Govt. in the West Greybull area of Big Horn County. Two million cubic feet of gas daily was recovered through choke from the Greybull sand. There also was a substantial amount of distillate. Well was drilled to 12,177 feet total depth, with Tensleep topped at 12,127 feet and was plugged back for completion in the Greybull at the interval 10,358-10,362 feet.

The Wyoming Public Service Commission has scheduled a hearing July 17 on the application of the Platte Pipe Line Co. to operate its new line from Worland to the Wyoming-Nebraska line. The entire line, now under construction, will extend to the Wood River, Ill., area.

Colorado

Mountain Fuel Supply Co. recovered seven million cubic feet of sweet gas per day at its No. 2 extension in the East Hiawatha field. Production was around the 4,615 foot level.

In the Denver-Julesburg Basin, British American recovered three million cubic feet of gas per day on a test of the D sand at its No. 1 State B in Logan County. Test was for 30 minutes at the 4980-90 foot interval. Location is se sw ne 21-11n-53w.

Several new wildcats have been announced for the Denver-Julesburg Basin. Sterling is the center of some of these tests, scheduled to the east, west and south of that community

Superior Oil Co. plugged its No. 1 State in the Eads area of Kiowa County after reaching granite at 5,588 feet. There was a showing of oil in the Pennsylvanian, but no commercial quantity was recovered.

The Colorado Oil and Gas Conservation Commission has issued a new order to conserve gas pressure in the Weber sand of the Rangely field, in the northwestern part of the state. Production is limited to 150,000 cubic feet per day from any one well unless the additional recovery is returned to the sand.

Nebraska

Important new tests of the Chadron Arch are indicated with the action of British American Oil Producing Co. in acquiring 62,500 acres in Cherry County from M.A. Murphy of Denver. Company will drill a test to the granite. Several other companies have been active in exploration of the arch.

On a farmout from Gulf Oil, Nebraska Drillers recovered good production from its No. 1 Torgeson, ne sw nw 23-14n-56w, Kimball County. Three thousand feet of oil were recovered in a one hour test of the J sand, which was topped at 6,512 feet.

Magnolia Petroleum also found a producer in the J sand at its No. 1 Eustice, nw nw nw 15-13n-54w, Kimball County. Recovery was at the rate of 132 barrels daily from the J sand.

Utah

Carter Oil Co. was drilling below 9,280 feet after making good recovery at its No. 3 Ute-Tribal, a southern extension of the Roosevelt pool in Uintah County. Operator recovered 8,610 feet of oil in two hour drill stem test of the interval 9,225-80 feet. Location is c se ne 28-1s-1e.

M. M. Travis of Beverly Hills, Calif., will drill in Duchesne County for test of the Wasatch. The test is southeast of the Duchesne field.

Sunray Oil Corporation's well on the R.S.F. Lease in the Pico Canyon field. Left to right are tank farm gaugers R. W. Miller and Chuck Towles.

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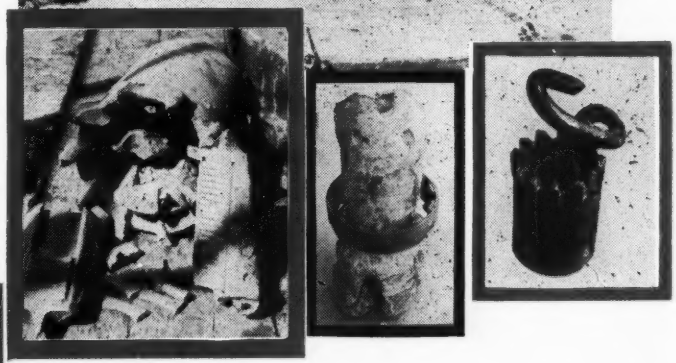

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Brown Drilling In Western Australia

Brown Drilling Company has been awarded a contract to drill in Western Australia for the California Texas Oil Company, Limited. The drilling equipment, parts and supplies for the operation are now enroute to Australia. This equipment (weighing something like 3,000 tons and capable of drilling to 15,000') was completely unitized in California.

The drilling personnel for this project are all taken from Brown Drilling Company's California organization. The project will be headed up by Allen Dysart, drilling superintendent, who has had several years' experience in the Middle East for the company in like capacity.

Brown Drilling Company has been active in oil development in the Persian Gulf area off and on since 1946, doing contract work for the Arabian American Oil Company, Bahrein Petroleum Company, Limited and the American Independent Oil Company.

It is anticipated that the first test well will be drilled to considerable depth in order to test out the prospective sedimentary rocks of this area. If oil is found, the results will be significant, not only to the Australian Continent, but also to the free world, which will have another stout stake driven in its defenses.

Many problems presented themselves for solution before drilling could begin. Not the least of them was the transportation of the 3,000 tons of equipment to the area of operations. To decide how best this could be done, an advance party of five men, including Allen Dysart, left the United States for Western Australia last September under the leadership of Carl Newcomb of the California Texas Oil Company, Limited.

The main task of the advance party was to decide how best to get all the paraphernalia for the drilling operation to the work area, which is in rough, isolated terrain some 800 miles from Fremantle, the nearest large port.

The North West Basin, in which the drilling will take place, is a vast semi-desert tableland beset by large stone outcroppings and spinifex, a porcupine grass which cuts like a razor. In addition, there is a hot sun, only dirt roads and, at certain season, monsoons, which blow in from the Indian Ocean.

It was decided that equipment could be best off-loaded in Exmouth Gulf at a point near Learmonth from ocean-going craft onto barges or LCM's. Accordingly, the ocean-going freighter conveying the equipment to Australia also carried as a deck load three LCM's for this use.

The following men are now enroute to Australia to supervise the off-loading, proper warehousing, assembling, etc. of the equipment upon its arrival: Allen Dysart, superintendent; David Smith, clerk; Albert Sturman, mechanic; Virgil Abney, driller; Charles Kemp, driller; and Lee White, assistant driller. The balance of the drilling crew will follow within four to six weeks.

E. C. "Ned Brown, president of Brown Drilling Co., wishes his drilling superintendent, Allen Dysart, good luck, as the latter is about to leave for Australia to head up a contract job for California Texas Oil Co. Ltd. Looking on are Mrs. Dysart and daughter Luann.

Lufkin Celebrates 50th Anniversary

Lufkin Foundry and Machine Company, largest manufacturer of oil field equipment in the South, is celebrating its 50th Anniversary this year.

A special Golden Anniversary edition of the Company's publication, The Lufkin Line, released recently, cites the history of the enterprise that has put the name of Lufkin in countries throughout the world.

Besides its pumping units and other oil field equipment, the Company produces truck trailers, commercial reduction gears and commercial castings.

Organized in 1902 as a small repair shop for railroad and sawmill machinery, the Lufkin Foundry has progressed and expanded its scope of operations during the past 50 years, until today it is known throughout the world.

The story begins back in 1902 when five men—F. Kavanaugh, F. Kavanaugh, Jr., J. H. Kurth, Sr. S. W. Henderson, Sr., and Eli Wiener—formed a company which was to repair sawmill machinery. The capital stock of the newly formed company was set at $30,000.

The original machine shop was set up at a cost of $21,500. Today the capital stock of the Lufkin Foundry and Machine Company is assessed at $5 million.

The late W. C. Trout, who was the strong, far-visioned, humanitarian who molded and shaped the policies of this Company for many years, came to Lufkin in 1905. At that time, he was traveling representative for the Allis-Chalmers Company.

He recognized the industrial pos-

sibilities afforded by the small town of Lufkin. There was plenty of room for expansion, an adequate supply of labor, abundant natural resources, and the low cost of living that a small town affords.

The little repair shop expanded, and instead of repairing machinery, the company began to manufacture sawmills. By 1906, the first Lufkin-equipped sawmill was in operation in southern Arkansas.

But by 1920, Lufkin Foundry had cut its teeth on the lumber industry. Most of the big sawmills were constructed, and the woods were being taken under custody of the larger companies in an effort to curb the wanton destruction of the fine forests.

The Lufkin Foundry then turned its attention to the newly discovered oil fields in South and East Texas. Mr. W. C. Trout found that little or no improvements had been made on the method by which oil was lifted to the surface since the begining of the industry.

Immediately the Lufkin Foundry began to pioneer and develop the application of reduction gears to oil well pumping. The original Lufkin pumping unit was conceived from the worm gear of a truck's rear end, to be driven primarily by an electric motor replacing the old type wooden band wheel with its long belt house built of wood.

In 1923, the first geared Lufkin pumping unit was installed at Goose Creek.

Other Lufkin products — steam drilling engines, draw works, refinery castings, and screwed and flanged pipe fittings for refinery purposes—began to invade world markets.

This Company, as did all others throughout the nation, felt the impact when the upsweep of prosperity in the early twenties took a devastating plunge in 1929. But through this chaotic period, the leadership of W. C. Trout never faltered.

His wisdom was manifest in one of his statements to his employees when he called them together one day during the darkest hours of the depression. He said, "The great assets of this nation are not its raw materials or its manufactured products, but it is the initiative, the energy, the self-reliance, and the character of its people."

In 1929, Lufkin changed from the worm gear to the herringbone gear, and in 1931, the first twin crank pumping unit was produced. This is still the standard design for their modern unit.

In 1939, the Company purchased the Martin Wagon Company, and from the old eight-wheel wagon being produced by this firm, the Company has progressed in the field of truck-trailers, until Lufkin trailers are seen on the highways throughout the United States today. Branch offices for the sales and service of Lufkin trailers are located in Houston, Dallas and San Antonio.

Also in 1939, the Lufkin Foundry began to produce commercial gear increasers and reducers. One of the first industrial gear applications were reducers to drive the paper machine at Southland Paper Mills, Inc., an industry that was just in its infancy in Lufkin at that time. Since then, the Company has produced many special industrial gear reducers and increasers for refineries, pipe lines, chemical plants, refrigeration plants, and others.

During the years of World War II, Lufkin Foundry was a vital link in the armament chain which led to final and complete victory for the United States. It was one of the major sources of supply for final drive herringbone gears for the General Sherman tanks, 1000 horsepower forward and reversing propulsion gear units for LST's, 500 horsepower drives for Army cargo boats, 10,000 RPM reducers for Destroyer escorts, and carriages for 6½ Howitzers.

The Trailer Division produced truck-trailers, laundry units, gasoline transports and other miscellaneous equipment.

For its contribution to the war effort, the Company was awarded the Army-Navy E, and three stars were added later.

The new gray iron foundry, one of the dreams of progress of Mr. Trout, was officially opened April 11, 1947. Thirteen days later, the beloved president of the Lufkin Foundry died.

In his honor, a plaque, erected on Company grounds by employees, was unveiled in brief ceremonies November 24, 1948. The inscription on the plaque reads, "To perpetuate the memory of him who through untiring effort and industry, unbounded enthusiasm, and great vision, built this institution to its place of leadership in industry and whose ideals remain a constant inspiration to those who follow him."

At the annual meeting of the Board of Directors in January, 1948, Walter W. Trout, eldest son of the late W. C. Trout, was named president.

The Lufkin sales organization, which encompasses the globe, is composed of oil field equipment salesmen, and Mill Supplies salesmen. Branch offices are located throughout the United States and in South America.

Officers of Lufkin Foundry and Machine Company are W. W Trout, president; J. H. Kurth, Jr. of Houston, vice-president; A. E. Cudlipp, L. A. Little, and E. P. Trout, vice-presidents; M. L. Wilkinson, secretary; and E. H. Bounds, treasurer.

Directors of the Company include the president, the vice presidents, and E. L. Kurth of Keltys, S. W. Henderson, Jr., Eli Wiener of Dallas, and Jacques Wiener of Shreveport, La.

Lotus Blooms From Old Geologic Deposits

Indian lotus, blooming in the National Capital Parks in Washington, was grown from seeds found in geologic deposits in southern Manchuria two years ago. The seeds were found under a layer of rocks and were at least many thousands of years old, according to paleontologists. First, the seeds were germinated in a test tube and given the benefit of all protection known to science. During the late summer of 1951 they were planted in the ground. It is not known whether such a thing has ever happened before, but from any viewpoint it is considered a remarkable occurrence.

Canoga Park Wildcat Spuds

Spudded and drilling down is W. J. McCarthy and Dennis Wally's Moss-LeSage No. 1 on Sec. 9-1n-17w in the Canoga Park area of Los Angeles County. Contractor is Petrie Drilling Company. McCarthy and Wally's Frank Knapp No. 2 on Sec. 4-1n-17w is idle temporarily at 1600 ft., plus or minus. Heavier equipment may be rigged to the test at a later date.

Lufkin Expands Pacific Coast Division

West Coast Warehouse and Service Departments of Lufkin Foundry & Machine Company, located at 5959 So. Alameda Street, Los Angeles, California, have been expanded in order to render better service to western industry and oil operations, has been announced by Mr. V. J. Fawcett, Pacific Coast Manager in charge of Gear Sales. "We have realized for more than a year the need for larger quarters and have carefully planned this expansion, recognizing the necessity for maintaining our service and deliveries without inte ruption," Mr. Fawcett stated.

"In addition to the needs of our pumping unit operations, we were faced with requirements for added space to handle our expanding Gear Sales and Service Departments. Space was carefully alloted in our larger plant layout to take care of all foreseeable needs. vital to maintenance of the service we have always provided Lufkin customers.

In keeping with Lufkin's policy of the finest engineered equipment, designed for trouble-free rugged service we shall continually strive to keep pace with the rapidly expanding needs of Pacific Coast industry at all times," concluded Mr. Fawcett. Lufkin's Western operations include both sales, warehousing, and servicing facilities in major Pacific Coast cities.

B.S.&B. Issues Revised Catalog

Black, Sivalls & Bryson, Inc. announces the publication of a revised edition of the Diaphragm Control Valve Section of their BS&B Climax Control Equipment Catalog.

This section, number 105, shows photographs, sectional drawings and face-to-face dimensions of the new or completely redesigned items.

Completely new is the Type 87 Diaphragm Control Valve with bellows sealed stem. This valve is offered for use in chemical and other industries where even slight leakage of flowing medium might become obnoxious, dangerous or excessively expensive.

Another new item is the 115 expanded Outlet Diaphragm Control Valve. It has been especially designed to provide a valve controlling flow of gases that require greatly increased volume upon release of pressure or liquids that are subject to a degree of flashing which would render an expanded outlet necessary.

Also new is the 1486 Three Way Diaphragm Control Valve which is designed for applications requiring change of direction, or partial splitting or mixing of the flowing medium in a system, as dictated by the controlling instrument. It finds application on vacuum or automatic lift traps where fluids are dispelled from a zone of lower pressure to a zone of higher pressure without the use of a transfer pump utilizing high pressure gas. In petroleum production, the three way valve is widely used where air or gas lift is applied as a means of secondary recovery, or in high pressure dehydration units for switching streams from one contactor or absorber to another.

Section 105, covering these and other items will be furnished free upon request. Address your letter to Black, Sivalls & Bryson, Inc., Advertising and Sales Promotion Department, 7500 E. 12th Street, Kansas City 3, Missouri.

New Rotary Drilling Cut-Off Chart Offered by Leschen

A simplified, easy to read rotary drilling wire rope cut-off chart has just been made available to oil field operating men by A. Leschen & Sons Rope Co. The chart is printed on heavy, plasticoated stock, punched at the top for convenient hanging. It shows approximate lengths of rope to cut, at the proper intervals, according to rope size, drill pipe size, excess weights, and depth of hole. The reverse side contains a hook load and lead line pull chart, wire rope breaking strength chart, and wire rope recommendation chart for oil field applications. It is strikingly printed in black and red. For copies write Dept. A, A. Leschen & Sons Rope Company, 5909 Kennerly Avenue, St. Louis 12, Missouri.

Toledo Issues 50th Anniversary Brochure

The Toledo Pipe Threading Machine Company of Toledo, Ohio, recently issued a very attractive brochure covering their fifty years of progress.

The brochure illustrates their progress in plant growth as well as the very important progress made in the many manufactured products.

A copy of this brochure may be had by writing to the Company at 1445 Summitt Street, Toledo 4, Ohio.

The Los Angeles Warehouse and Service Departments of Lufkin.

Field Development

Richfield Hits San Emidio Find

Richfield Oil Corporation has done it again. This time it has come up with a new discovery in the San Emidio area, 25 miles southwest of Bakersfield. The well, San Emidio A No. 18-21 on Sec. 21-11n-22w, on formation test produced 16.8 gravity crude oil at the rate of 500 barrels a day along with natural gas in quantity. Drilled to a total bottom of 8006 ft., the well was plugged back to 7280 ft. and the test run of the interval of 7253 ft. and plug. Location is 11 miles west of Richfield's recent discovery near Wheeler Ridge at the south fringe of San Joaquin Valley and about five miles east of the nearest wells producing in the Maricopa area. It is slightly less than 1000 ft. from the company's 10-in. crude oil line stretching from Cuyama Valley to its A. M. Kelley pump station, which sends the oil on its way to Watson refinery. The derrick stands near the center of a lease block embracing 4300 acres, mainly composed of holdings of Kern County Land Company. Richfield's successful wildcat was the third test to be drilled in the area. The 7-in. casing was run for the final touch in the Etchegoin. The company headed by Charlie Jones and Frank Morgan has worked wonders in California fields. Richfield discoveries in recent years in addition to the latest strike include those in Cuyama Valley, Wheeler Ridge Eocene and Miocene. Loffland Brothers are digging the Oakridge project.

Camden Wildcat Production Failure

Seeking a northwest extension of the Camden field in Fresno County, Coast Exploration and Golden Bear Oil drilled and cored their Evangelho No. 42 to 7514 ft. without avail. The well, on Sec. 27-16s-19e, showed some gas, but evidently no oil.

Wheeler Ridge Oil Play Growing

The wildcat play initiated in the Wheeler Ridge area by Richfield has added a new operating organization. There Signal Oil & Gas Company is probing for production with a test well on Sec. 4-10n-20w, a couple of miles south of the Richfield discovery holes. The venture is in combination with Intex Oil Company, but Signal will act as operator. Known as KCL No. 1, the wildcat probably will be drilled to a depth approximating 7000 ft. for a test of the Lower Miocene. Loffland Brothers are in charge of operations. Pacific Western Oil Corporation has entered the play with the acquisition of the 60-acre Young lease on the southwest quarter of Sec. 18-11n-20w, two miles northwest of Richfield's strikes. One-half mile east of the discoveries, Standard of California's KCL-2 No. 356 on Sec. 28-11n-20w is drilling at 2960 ft.

Cuyama Valley Wildcats Drill

Two of the most interesting wildcat wells currently looking for new oil in Cuyama Valley continue to drill ahead. M J M & M Oil Company's Wilshire-USL No. 1 on Sec. 8-9n-26w is making hole at 5608 ft. Superior Oil Company's Cuyama Government No. 1 on Sec. 21-9n-26w is digging at 6172 ft. Both are in the Santa Barbara County portion of the valley.

Tunis Creek Strike Major

D. K. Partnership No. 3 has scored with a strike of major importance with its Corral No. 88-20 test on Sec. 20-11n-18w in the Tunis Creek area, Kern County. The well was completed flowing at the rate of 1000 barrels 36 gravity oil and 500,000 cubic ft. of gas daily. Bottomed at 3397 ft., 7-in. pipe is set at 2900 ft., with perforated intervals at 2690-2717 and 2723-2733 ft. Indications are that D. K. has clicked with a discovery in the Lower Miocene, comparable to the find recently made by Richfield a dozen miles away in the Wheeler Ridge area. D. K. has a lease of 27.5 acres acquired from Reserve Oil & Gas Company. Reserve holds a 50 per cent interest in the play. The discovery well appears to be the first hole put down in the section and it was originally slated to question the Tecuya zone at approximately 2500 ft. Oil failed to show in the zone and following a review of geology the company decided to take the well deeper, a move which has obviously proved most profitable. On the drilling trip several oil sand measures were noted and not all opened to production. Location of the strike is about three-quarters of a mile west of the nearest Springs Fault production. The oil fraternity generally agrees that what was found by D. K. Partnership may prove as important as the first Slosson discovery in the area.

Ten Section Wildcat Quits

Kern County Land Company has abandoned its first wildcat venture under its policy of engaging in limited exploratory operations for its own account. The well is called KCY No. 44-33 and was carried to a depth of 8664 ft. on Sec. 33-30s-26e in the Ten Section area, Kern County. The objective Stevens was in place, but gray and bereft of oil. KCY No. 44-33 was the first of a program of exploratory wells which the company is likely to put down on its own lands.

Los Angeles Basin

Placerita Adds Wells

The Placerita field has added a couple of new producing wells. General Petroleum has completed its Castruccio No. 7-A on Sec. 31-4n-19w. Tevis F. Morrow's Tevis F. Morrow-Independent No. 1 was completed at a plugged depth of 2550 ft. for 18 barrels of 8.4 gravity oil daily, cutting 40 per cent initially. With H. L. Shepard as engineer, Newhall Drilling Company has commenced its Poco No. 3 on Sec. 6-3n-19w.

Athens Well Drilling Ahead

Camay Drilling Company, contractor, is drilling in the relatively shallow formations with Union Oil Company's Howard Park No. 44 on Sec. 18-3s-13w in the Athens-Rosecrans field. On the same section, Terminal Drilling Company's Pacific No. 3 has reached 4400 ft. and is going on down. On Sec. 20-3s-13w, Carlton Beal at last reports was making hole at 6315 ft. with Murdock No. 2.

Inglewood Well Spudded

Contractor Santa Fe Drilling Company is drilling ahead following spudding of Basin Oil Company's Potrero No. 19 on Sec. 34-2s-14w in the Inglewood area. The scheduled target is a zone around 4500 ft., which is yet to be produced. In the Montebello field, The Texas Company has staked location for Anita Baldwin No. 19 on Sec. 6-2s-11w.

West Newport Test Sets Pipe

Solano Oil Company's Solano No. 2 wildcat near Atlanta and Cannery streets on Sec 12-6s-11w in the West Newport area of Orange County has been cased with 5½-in. pipe to bottom at 5714 ft. Pacific Supply's Mills No. 1 on Sec. 13-6s-11w has reached a depth of 6715 ft. where a fishing job intervened. The company's Surf No. 2 on the section is awaiting rig. Petrie Drilling Company is putting the Pacific wells down and engineering is the work of Al Hunter.

Santa Fe Springs Wildcat Redrilling

Near the Santa Fe right-of-way and Laurel avenue in the Santa Fe Springs area, Rothschild Oil Company's Tucker No. 1 on Sec. 5-3s-11w is redrilling at 4440 ft. The venture was drilled originally to 8082 ft. and in so doing topped the Clark zone at 8010 ft. on the same section. They recently completed Emmens No. 1 on the section at 7566 ft. flowing several hundred barrels of oil daily.

Humble Oil & Refining Company's N. L. & F. No. 9, Castaic Junction field. Left to right: Charles Damron, cathead; Harold E. Choate, racker; W. D. Durham, lead tong; L. D. Choate, driller; Wally Williams, service man and R. R. Meadows, pusher. Drilling contractor is Loffland Bros.

Castaic Try Digs

In Paradise Valley near Castaic, Paradise Valley Oil Company's Mary Austin No. 1 explorer on Sec. 28-6n-17w continues to dig deeper at 4400 ft. The well was commenced by other interests and at various intervals has been credited with some encouragement.

La Habra Heights Wildcat Inactive

For a time at least Universal Consolidated Oil Company's Curtis No. 2 is idle at 5610 ft. It is on Sec. 31-2s-10w in the La Habra Heights area. The company's Curtis No 3 on the section is drilling at 2240 ft., with Gene Reid Drilling Company in charge.

San Fernando Wildcat Drills

Near the town of San Fernando Standard of California continues to poke deeper with its Mission No. 4-1 wildcat well on Sec. 1-2n-16w. The drilling is in the expert hands of Rocky Mountain Drilling Company. North of Del Valle, Seaboard Oil is about to take the first bite of ground with its Seaboard-SCPC-Daugherty No. 1 wildcat on Sec. 9-4n-17w.

Hasley Test Makes Progress

K. L. Kellogg & Sons, contractor, is drilling at 7740 ft. with Ohio Oil Company's Douglas No. 1 well on unproved ground on Sec. 4-4n-17w in the Haskey area of Los Angeles County. Keystone Oil Development Company's Hammon No 3 wildcat on Sec. 8-3n-16w at Towsley Canyon at last reports was down near 700 ft.

Aliso Canyon Test Digs Deeper

Union Oil's Porter-Sesnon No. 1 test on Sec. 4-2n-16w in the Aliso Canyon area is drilling at 4530 ft. under the guidance of Camay Drilling Company. At Brea-Olinda, the company's Naranjal No. 47-33 at this writing was drilling and coring at 6800 ft.

Lake Elsinore Try Plans Deepening

All signs indicated that Anne Arnold will carry deeper the Conklin-Walker No. 1 exploratory venture near the shore of Lake Elsinore on Sec. 18-6s-4w, Riverside County. Present depth is 2366 ft. and the well probably will go to at least 4000 ft. for a more conclusive test. The area generally has been the scene of a few prior test wells, which failed of their purpose and were relegated to history.

Chino Hills Test Working

At Chino Hills in San Bernardino County, L. H. Cameron from the latest information was drilling below 1900 ft with No. M-9 test on Sec. 5-3s-8w. The 12-in surface pipe was cemented at 82 ft.

Del Valle Well Pumps

Southern California Petrolcum Corporation's N. L. & F. No. 1 on Sec. 20-4n-17w in the Santa Clara sector near the Del Valle field has been recompleted for 115 barrels of 32.4 gravity oil a day on the pump. The project was deepened from old bottom of 9022 ft. to present depth of 9972 ft. A year ago the well was first brought in as a new field discovery.

Whittier Try Fishing

At Whittier Narrows, Sierra Oil Company's City of Whittier No. 1 wildcat on Sec. 8-2s-11w, Los Angeles County, is down 3526 ft., but fishing.

Playa Del Rey Well Completed

Bolsa Chica Oil Corporation has completed its Kidson No. 1-1 wildcat well on Sec. 21-2s-15w for an initial flow of 376 barrels of 23.8 gravity crude oil and 500,000 cubic ft. of gas daily. Yield as this is set down is 198 barrels of 24 gravity oil and 130,000 cubic ft. of gas a day. The project was first completed last December at an approximate rate of 70 barrels a day, a yield which showed a swift disposition to decrease. Some months ago the operator went back into the hole and redrilled the well from 2120 ft. to a bottom of 7463 ft. The well the first time went down to 7474 ft.

The Lufkin Line

By VIC FAWCETT

50th ANNIVERSARY

Vic Fawcett

The "Lufkin Line" magazine, commemorating the 50th Anniversary of Lufkin Foundry & Machine Company arrived this week at my desk. It is thoroughly enjoyable. A few extra copies are on hand. I'll gladly send a copy on request—as long as the supply lasts.

This issue recounts the history of a little repair shop. The date—February 17, 1902. The place—Lufkin, Texas.

Virginia R. Allen, Editor, has presented the Lufkin story in excellent form and, with grateful acknowledgment, I would like to quote a paragraph or two:

"Half a century ago, a group of five men met on February 17, 1902 to organize a little repair shop for railroad and sawmill machinery. That shop was the birthplace of an enterprise."

"Today that little company has grown to what is considered the largest manufacturer of oilfield equipment in the South. Its products, in addition to oilfield equipment, include truck trailers, industrial reduction gears, commercial castings, and are known the world over."

"The story of an institution is the story of a man. And as the institution grows, it becomes the story of many men." The story begins with the group of five. F. Kavanaugh, J. H. Kurth, Sr., S. W. Henderson, Sr., F. Kavanaugh, Jr., and Eli Wiener.

"It was on July 10th, 1905, that another character entered into our story. He was a tall, dynamic young man who hailed from Wisconsin, but who had an abiding love for Texas and her beautifully timbered sections. He was W. C. Trout, a traveling representative for Allis-Chalmer Company.

"From that day until his passing on April 24, 1947, he was the "spark plug" if you please, the strong, far-visioned, humanitarian who molded and shaped the policies of this company with loving hands and inspired wisdom."

Yes, it's an interesting story—with a full measure of all the pioneering spirit that builds a great organization. It's great to be a part of such an organization. Of course, it goes without saying, that the loyal support of its friends and customers have made Lufkin's success outstanding.

Vic Fawcett

Union Oil Adds Oakridge Production

Ventura County's Oakridge area has rewarded Union Oil Company with a new source of crude oil. There the company's Simi No 17 on Sec. 3-3n-18w hit oil sand around 2850 ft. and a test of the top 25 ft. of formation promised a well of between 500 and 600 barrels a day. The zone apparently was still in evidence while drilling was several hundred ft. deeper but to press time no trials had been run with all the formation open. Location of the strike is two and one-half miles from the Torrey No. 83 well. Performance of the Simi well has prompted the company to program at least four more drilling jobs for the area. This well and the Torrey discovery repose on on the 30,000-acre block of land that is owned in fee by the Union Oil Company. Gravity of the crude produced on test is 25 degrees. Continued drilling in the well may ultimately reveal a zone comparable to thickness of the formation brought to light in the Torrey finder.

Oil From Coal Costly Experiment

A report on synthetic oil costs will be studied at the meeting of the National Petroleum Council in Washington, July 29. The Federal Bureau of Mines holds that with an adequately financed plant it can produce synthetic gasoline for about 12 cents a gallon at the refinery. It is reported to have engaged a New York engineering company to delve into the matter and prove its claim. However, the petroleum industry countered the Government's claim with reputable research organizations and turned loose its own engineers, chemists and analysts in an exhaustive and costly survey. In summation, the oil industry evidently found that the Bureau of Mines' assertion was 30 cents a gallon in error and that discounting the sale of chemical by-products, which it holds is irrelevant, the Federal projects would cost 41 cents a gallon.

San Joaquin Valley

Goosloo Area Explorer Digs

In the Goosloo area in Kern County, The Texas Company is drilling at 2140 ft. with its KCL-Goosloo-South No. 1 wildcat venture on Sec. 8-30s-25e. Texaco has locations for Ellen Kovacevich No. 1 test on Sec. 23-31s-29e at Mountain View, and Occidental No. 1 on Sec. 16-26s-19e at Beer Nose.

Bird Creek Wildcat Drills

Near Bird Creek in San Benito County, The Texas Company's Recht No. 1 prospect job continues to drill on down at 960 ft. Fowler Drilling Company is drilling the well on Sec. 24-13s-5e. Standard of California's Nicholas No. 3 on Sec. 28-16s-12e on the Ciervo Anticline is making hole at 1475 ft. Near by, Calzona Exploration Company is slugging away at 1990 ft. with its Calzona No. 1 on Sec. 8-17s-11e. Julius S. Beck's Edward No. 2 is a location on Sec. 28-16s-12e. On the Vallecitos Anticline, Commercial Oil Company's McDonald No. 2 on Sec. 24-16s-11e has reached 1150 ft. and is inactive at that point while equipment is being repaired.

Tejon Ranch Old Well Digs

Reserve Oil & Gas Company is boring at 2740 ft. on No. 88-30, formerly Macrate Oil's Reserve No. 1 on Sec. 30-11n-18w on the Tejon Ranch. Reserve's No. 88-25 test on Sec. 25-11n-18w was given up at 379 ft. in tar sand and claystone.

Pioneer Anticline Wildcatting Foreseen

Union Oil Company and Richfield Oil Corporation have each in their own right obtained leases in the Pioneer Anticline area. Their acquisitions are reported to take in no less than 5000 acres. It appears that the ground was acquired as a result of the Eocene discovery at Wheeler Ridge, 30 miles to the east. The deep chances have not been tested in the area and drilling operations there would be followed with interest.

Tejon Hills Test Spudded

Land east of the Tejon Hills field is the scene of a test well spudded by J. F. Kosanke. It is KC No. 10 on Sec. 14-11n-18w. The operator's KC No. 9 on the section was suspended at 780 ft. Also on the same section, Charles E. Phillips is ready to deepen from 1277 ft. the FKP No. 1 test. Chanac Associates have abandoned one wildcat and started drilling another on Sec. 7-11n-17w, two miles east of Tejon Hills production. Chanac's original test, White Oak No. 1, was located 50 ft. east of the new project and was given up at 286 ft. in granite. The new test is called White Oak No. 2.

Old River Try Digging

On Old River wildcat ground, Humble Oil & Refining Company's KCL-D No. 2 is digging at 2930 ft. on Sec. 15-30s-29e. San Joaquin Drilling Company is contractor. Humble's KCL-C No. 3 at Rosedale is a location on Sec. 22-29s-26e.

Maricopa Scene Of Shallow Development

Columbia Oil Company is moving ahead with an interesting shallow development campaign in the Maricopa area of Kern County. So far the company has reconditioned and placed back on production four old wells on Sec. 18 at Maricopa Flat. They are putting out between 10 and 15 barrels a day each from depths averaging about 400 ft. Other wells are in the process of being finished. The company in addition is currently drilling Columbia No. 6 to a designated level around 700 ft. Oddly enough, the well is credited with having picked up showings as shallow as 16 ft. They evidently continued down to 43 ft. The campaign is on ground three miles southwest of the town of Maricopa.

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Temblor Range Wildcat Works

In San Luis Obispo County's Temblor Range area, Neaves Petroleum Development of Beverly Hills is ready to spud its Neaves-Elkhorn No. 2 test on Sec. 28-32s-22e. The first test well drilled on ground about one-half of a mile southeast to 3780 ft., without commercial success, although minor showings were encountered. At Panorama Hills, George Terry Drilling Company is rigging to drill an exploratory hole on Sec. 7-31s-21e. The company not long ago blocked up considerable acreage in the area.

Cymric Wildcat Making Hole Ahead

Green & Heiser, contractors, are drilling ahead above objective depth with Intex Oil Company's scheduled 5000-ft. Oceanic test well known as Cymric No. 34 and located on Sec. 21-29w-21e in the Cymric area. The project is an offset to the Intex Cymric No. 23 producer. Intex Oil's EP-USL No. 3 at Santos Creek as this is written is coring and drilling ahead at 1150 ft. The Carneros was absent in the well, which was idle for a time before carried on down.

Fruitvale Try Completed

Westates Petroleum Corporation has completed its KCL No. 1 on Sec. 11-29s-27e northeast of the Fruitvale field. Casing was run to

a point near bottom at 2770 ft., with top of the Fairhaven zone placed at 2756 ft. Representative production gauge of the new well is not yet available. Location is one-quarter of a mile north of wells recently completed by Norbel Oil Corporation. It is also one-half of a mile east of Norbel's KCL No. 73-10 wildcat on Sec. 10-29s-27e, coring at 3100 ft. The latter is one mile north of production. Southeast of Fruitvale Sunray Oil's KCL No. 1 on Sec. 35-29s-27e continues to dig ahead below 4600 ft. Between Fruitvale and the Rosedale field, Richfield Oil's KCL-E No. 54-18 wildcat on Sec. 18-29s-27e was last reported drilling at 6580 ft.

Grapevine Try Started

Work has begun on Continental Oil Company's KCL No. S-1 on Sec. 1-10n-20w near the Grapevine on Highway 99. Location is one-half mile southwest of the Tejon field.

Edison Field Adds Producer

Macmillan Petroleum Coporation's Porter No. 28-5 on Sec. 28-30s-29e in the Edison field has been completed at a redrilled depth of 4655 ft. for a prime yield of 113 barrels of 19 gravity oil a day, cutting 24 per cent. The first time down the well went to 5236 ft. and topped basement rock at 5070 ft. Macmillan recently purchased California Exploration Company's interest in certain leases in the Edison area, which the two organizations held in combination since 1950. The leases which the two companies held jointly covered 325 acres with 10 wells producing on Sec. 20 and 28-30s-29e. The ground adjoins a 140-acre lease on Sec. 27 owned by Macmillan which already boasts five producing wells. A sixth well, No. 27-6 on the section is redrilling at 2900 ft., after going originally to 4309 ft. and plugging back for a fresh start at 3253 ft.

Salt Creek Wildcat Digs

West of the Salt Creek field, Herman B. Graves of North Hollywood is drilling at 1140 ft. with his Glory Hole No. 1 wildcat try on Sec. 24-29s-20e.

Media Agua Test Drilling

Hoover Drilling Company is digging below 1000 ft. with its Wright-USL No. 2 wildcat on Sec. 23-28s-19e in the Media Agua Creek area, Kern County. The play is made up of 700 acres with Intex Oil Company holding a one-half interest.

Vista Wildcat Starts Drilling

At Vista in San Diego County, several miles inland from the town of Oceanside, Tavis-Lucian Exploration Company's Tavis-Lucian No. 1 exploratory hole has started drilling operations. The drill site is on Sec. 14-11s-4w.

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Trico Wildcat Ready To Deepen

Harry H. Magee, Operator, is ready to deepen the Morris No. 1 wildcat in the Trico area on Sec. 36-24s-23e. Present depth is 11,460 ft., the level at which Standard Oil Company quit the well 14 years ago. Loffland Brothers have the Magee drilling contract and probably will carry the hole on down to around 13,000 ft. At Terra Bella, Norwood Oil Company's Gardner No. 5 on Sec. 35-22s-27e has been plugged back from a total bottom of 960 ft. to 920 ft. The well at last reports was pumping water with a trace of oil.

Paloma Test Grows Deeper

Deeper down goes Ohio Oil Company's important test well of the lower formations in the expansive Paloma field in Kern County. The project, KCL-A No. 72-4 on Sec. 4-32s-26e, at last reports was making hole at 14,000 ft. on a trip that may persevere to 20,000 ft. Diamond bits have been called for use in drilling the well and they keep tools operating in periods up to eight days. In a like period using conventional rock bits, four days would be consumed in pulling out the drill pipe to put on new bits and running the string back into the hole, leaving only four days of actual digging. Ohio's venture topped the Stevens zone at 10,040 ft.

Bellevue Try Drilling Ahead

Trying for production three-quarters of a mile west of the Bellevue field in Kern County, Standard of California's Karpe No. 53 wildcat on Sec. 34-29s-26e is drilling at 5340 ft. The Stevens zone is the prime objective, which is tapped in the Bellevue field proper and the Greeley field, about two miles northwest of the Karpe project. South of the Kern Front field, Standard has started its No. 52 test on Sec. 1-29s-27e.

Coastal and Northern District

Shiells Canyon Wildcat Working

The Harry C. Long, Operator, Basolo No. 2-5 wildcat on Sec. 5-3n-19w at Shiells Canyon is drilling at 2940 ft. Holmes Drilling Company is contractor on the job and the engineers are Kemnitzer, Richards and Diepenbrock. Jeff Dye Drilling Company's Capitan No. 1 test is a location on Sec. 34-5n-30w in the Capitan area.

Sisquoc Test Digging Ahead

Honolulu Oil Corporation's Honolulu-Sunray-Sisquoc No. 1 venture on unproved land in the Sisquoc area of Santa Barbara County is drilling at 4665 ft. under contract with Tine Gaiser. Honolulu's Efromson No. 1 is a Figueroa Mountain location on Sec. 19-8n-29w.

Santa Barbara Wildcats Drill

Shell Oil Company has two interesting wildcat wells drilling in close by areas in Santa Barbara County. Houston No. 1 on Sec. 19-7n-30w in the Corral de Quati area is drilling at 4163 ft. Mitchell No. 1 on Sec. 31-6n-30w in the Solvang area is making hole at 4389 ft.

Saticoy Test Coring and Drills

Near Saticoy, General Petroleum's SPS No. 1 wildcat on Sec. 28-3n-21w is coring and drilling ahead below 2500 ft. The company's Hill-Converse No. 1 wildcat on Sec. 27-3n-21w at West Mountain is busy likewise at 6000 ft. Hayes & Sprague are drilling both wells.

Ojai Test Drills On

Contractor Buaas Drilling Company is making hole at 6830 ft. with Richfield Oil's Ojai No. 67 test on Sec. 17-4n-21w in the Ojai area of Ventura County. At Upper Ojai, Richfield's Hillside No. 1 on Sec. 8-4n-21w has reached 9055 ft. Rushing Drilling Company is doing the work.

Piru Venture Fishing Bailer

Fishing for bailer occupies the attention of Pacific Western Oil Corporation at present with its Temescal No. 3 on Sec. 2-4n-18w in the Piru area, Ventura County. The well was first completed at a bottom of 2201 ft. back in 1926 and at that time produced initially 116 barrels a day. Pacific Western in recent months went back into the well and drilled in on down to 3970 ft., but plugged back for the final touch at 3400 ft.

Devils Canyon Oil Try Digging

The drill from the latest information was below 5500 ft. in Continental Oil Company's McBurney-USL No. 1 on Sec. 23-5n-18w in Devils Canyon, Ventura County. Terminal Drilling has the contract. In Holser Canyon, Crestmont Oil Companys Holser No. 6 wildcat on Sec. 14-4n-18w was reported pumping all water from a plugged depth of 6684 ft. Total bottom is 6750 ft.

Oxnard Test Makes Progress

Drilling at this writing is not yet at a critical depth in Petrol Producers & Refiners Corporation's Livingston No. 1 wildcat on Sec. 35-2n-21w in the Oxnard area of Ventura County. Drill site is about five miles east of the old Oxnard field.

Torrey Canyon Test Drilling

Union Oil's no dope hole, drilling on Sec. 5-3n-18w in the Torrey Canyon field, has reached 6782 ft. and is digging deeper. It is known as Torrey No. 84. In the Aliso Canyon area, Union's Ex-Mission No. X-7 on Sec. 33-4n-22w is drilling at 1560 ft.

Bardsdale Try Pumps

Rocky Mountain Drilling Company has completed The Texas Company's Elkins No. 1 test on Sec. 7-3n-19w in the Bardsdale area for 170 barrels a day on the pump, cutting 20 per cent initially. Total bottom is 7251 ft. and plugged back depth 7150 ft. On the Santa Ana Rancho, Superior Oil's Chismahoo No. 1 on Sec. 9-4n-24w threw in the towel at 8606 ft.

Fillmore Test Works

Ready to spud is Standard Oil's Symmons No. 1 wildcat venture on Sec. 25-4n-21w near Fillmore. At Conejo, E. H. Hansen has staked location for Viking No. 1 on Sec. 4-1n-20w.

EME Oil Company's EME #4 well, Newhall field. Left to right: Elmer A. Kelly, head well puller; Ellis E. Ball, floorman and Freddy Duckett, floorman.

Mattole Valley Wildcat Drilling

In the rustic and sprawling Mattole Valley of Humboldt County, Petroly No. 1 wildcat on Sec. 6-2s-2w is digging away at 2298 ft. At Hydesville, The Texas Company's Holmes-Eureka No. 1 test on Sec. 9-2n-1e is drilling at an inconclusive level.

Tehama Try Site Staked

George T. Cameron's Orland Comm. No. 4-1 wildcat test is a location on Sec. 19-23n-2w in the Orland area, Tehama County. In the vicinity of Patterson in Stanislaus County, Shell Oil's Elfers No. 36X-28 test on Sec. 28-5s-7e is making hole at 2370 ft. E. D. Berryman's Stillwater Plain No. 1 on Sec. 35-31n-4w at Redding, Shasta County, is currently idle at 460 ft.

King City Test Idle

Drilling has been suspended at 3929 ft. in Murdock Oil Company's Marian No. 1 wildcat on Sec. 9-20s-8e, a mile and one half northeast of King City in Monterey County. In the Pleito territory. The Texas Company's Signal No. 1 test on Sec. 28-24s-10e is digging at 1710 ft. The Helm Company and Robert and Hans R. Sumpf have location staked for their Adrian Orradre No. 2 wildcat on Sec. 30-21s-11e in the San Ardo area.

Gaviota Area Wildcat Locale

Near the spudding stage is DeWitt Langford's Hollister No. 1 wildcat test on Sec. 34-5n-33w in the Gaviota area, Santa Barbara County. A number of test wells have been punched down in the area during past years. Several of these earlier holes found oil and gas showings, but all finally were given up as production failures.

Princeton Gas Try Area

E. A. Bender is preparing to drill Whitney No. 1 on Sec. 10-17n-1e in the Princeton area of Butte County. Location is about two miles northeast of Honolulu Oil Corporation's Honolulu-Humble-Wild Goose No. 1. The latter was completed a year ago as a finder of new natural gas supplies. Meantime, Bell & Burden has been awarded contract to drill Honolulu's Hangtown No. 1 test on Sec. 17-7n-1e in the Wild Goose Country Club area. The contractor is drilling at 3900 ft with Honolulu's Humble-Tule Goose No. 1 on the same section.

Colusa County Wildcat Cased

DeWitt Langford has taken over and has run 5½-in casing in Neita Peterson No. 1 wildcat on Sec. 6-17n-4w on the Sites Anticline in Colusa County. Two hundred and forty ft. of zone are in line for testing. Formerly flying the banner of L. O. Tarrant, the well has been idle since December 1950 at 3360 ft.

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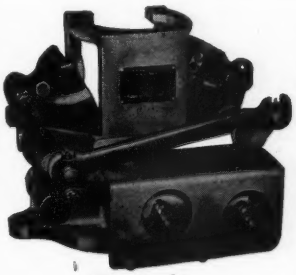

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Doctor: "I advised you that your ailing wife should have plenty of salt air. What did you do about it?"

MacTavish: "I fanned her every morning with a herring."

Hubby: "What are you planning to do tonight?"

Wife: "Nothing special. I'll probably write a letter or two, watch television, and so on."

Hubby: "Well, when you get to the 'so on,' don't forget my shirt buttons."

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Two Irishmen were discussing the good old U. S. A.

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Pat: "And how's that?"

Mike: "The paper sez ya ken buy a foive dollar money order for eight cints."

The girl who keeps on her toes keeps away from heels.

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"We just met. I don't blame nobody."

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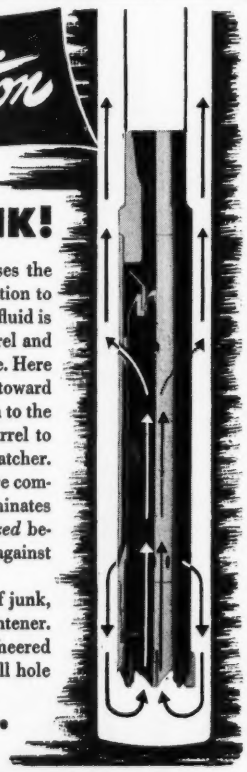

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